

# **For Reference**

---

**NOT TO BE TAKEN FROM THIS ROOM**



Ex libris  
UNIVERSITATIS  
ALBERTAENSIS





Digitized by the Internet Archive  
in 2024 with funding from  
University of Alberta Library

<https://archive.org/details/Stickel1973>

















THE UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR .Mrs. Lorna Stickel.....  
TITLE OF THESIS .A Study of Depreciative Behavior in Three  
Undeveloped Campgrounds in Jasper National  
Park Alberta.....  
DEGREE FOR WHICH THESIS WAS PRESENTED Master of Science...  
YEAR THIS DEGREE GRANTED .....1973.....

Permission is hereby granted to THE UNIVERSITY OF  
ALBERTA LIBRARY to reproduce single copies of this  
thesis and to lend or sell such copies for private,  
scholarly or scientific research purposes only.

The author reserves other publication rights, and  
neither the thesis nor extensive extracts from it may  
be printed or otherwise reproduced without the author's  
written permission.



THE UNIVERSITY OF ALBERTA

A STUDY OF DEPRECIATIVE BEHAVIOR IN THREE UNDEVELOPED  
HIGHWAY CAMPGROUNDS IN JASPER NATIONAL PARK  
ALBERTA

by



LORNA J. STICKEL

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH  
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF MASTER OF SCIENCE

DEPARTMENT OF GEOGRAPHY

EDMONTON, ALBERTA

SPRING 1973





THE UNIVERSITY OF ALBERTA  
FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled A Study of Depreciative Behavior in Three Undeveloped Highway Campgrounds in Jasper National Park, Alberta submitted by Lorna J. Stickel in partial fulfilment of the requirements for the degree of Master of Science.





## ABSTRACT

This study was primarily an exploratory examination of the various aspects of campers' depreciative behavior in three smaller undeveloped highway campgrounds in Jasper National Park, Alberta. Various research techniques such as participant observation, interview, and questionnaire were used to obtain a greater understanding of depreciative behavior. An effort was made to compare this study with a similar one conducted in developed campgrounds in the northwestern United States and to try and place the study of depreciative behavior into a recreational carrying capacity perspective for the benefit of future national park planning purposes.

Behavior which has the potential to cause natural environment deterioration or which detracts from the recreational experience of other campers is considered depreciative. A certain amount of this behavior was found to occur in the three campgrounds under study. Although the greatest proportion of these acts had the potential to affect other campers, there was also a substantial amount of depreciative behavior which has an impact on the natural environment. In general although campers did not seem to hold approving attitudes towards depreciative behavior they did not appear to have been aware that such behavior occurred



in the campgrounds in which they were staying. There was some indication that campers might have been more concerned about depreciative behavior if they had been aware that it was taking place. Campers further indicated that they were not greatly bothered by all types of depreciative behavior, but they felt that they would become involved if they saw certain types of depreciative behavior occurring.

Managers tended to be much stricter and more concerned about depreciative behavior and appeared to base their assessment of camper attitudes and opinions on the behavior of campers as it was observed. The discrepancy between the campers' observed behavior and his verbal expressions concerning that behavior is an area where much could be done to affect camping problem behavior. Several suggestions are made as to how this discrepancy could be alleviated by placing greater stress on the preservation and education aspects of the national parks, rather than considering the parks primarily as recreational resources.





## ACKNOWLEDGMENTS

The completion of this study would not have been possible without the kind assistance of various people during the different stages of research. Initially my thanks go to the Canadian National Park Service for allowing me to conduct research in Jasper National Park and granting me a scholarship for the completion of this study. Of course, any conclusions reached in this study are my own and not those of the Canadian National Park Service. My special thanks go to Mr. Doug Wellock, Supervisor of Visitor Services in Jasper National Park for his help during the course of the research. A most essential ingredient of any thesis is an advisor, and to Dr. Ian MacIver I owe my greatest debt of gratitude for his unfailing ability to constructively criticize those aspects of this study which needed either clarity or reworking. I also owe a word of thanks to Mr. Lanier and Dr. P.J. Smith for their time in reading the various drafts of this study. There are many other people who have supplied valuable information and services in connection with this thesis and in general the whole project itself would never have been conceived or carried out without the basic assistance of the Geography Department at the University of Alberta. In closing I must add that my husband, Alan, helped me keep my sanity during the various stages of thesis research, and must be congratulated for putting up with a third party in the form of this study.



## TABLE OF CONTENTS

| Chapter                                                     | Page |
|-------------------------------------------------------------|------|
| I. CANADIAN NATIONAL PARKS: THE ISLANDS OF CANADA           | 1    |
| The Canadian National Park System                           | 4    |
| Historic Roots                                              | 4    |
| Park Policy                                                 | 7    |
| Present Use, Overuse, and Misuse                            | 9    |
| Solutions to Overuse and Misuse                             | 14   |
| The Study Focus                                             | 13   |
| Thesis Organization                                         | 21   |
| II. ATTITUDE, OPINION, AND PERCEPTION STUDY                 | 24   |
| Environmental Perception Study in Geography                 | 25   |
| Other Definitions from the Social Sciences                  | 32   |
| Recreational Geography                                      | 41   |
| Attitude and Perception Studies in Outdoor Recreation       | 43   |
| III. THE CAMPER AND CARRYING CAPACITY                       | 46   |
| Socioeconomic and other Characteristics of Campers          | 49   |
| Activity Patterns                                           | 53   |
| Camper Attitudes and Behavior                               | 59   |
| The Camper and Carrying Capacity                            | 67   |
| Management Objectives                                       | 70   |
| Recreational Impact on Physical Resources or Natural Limits | 71   |
| Camper Attitudes or social limits                           | 72   |
| Towards the natural environment and its modification        | 72   |
| Towards the behavior of other campers                       | 74   |
| IV. STUDY AREAS, SAMPLE, AND METHODOLOGY                    | 82   |
| Choice of Study Area                                        | 32   |
| Description of the campgrounds                              | 86   |
| Rocky River Campground                                      | 87   |
| Mount Kerkeslin Campground                                  | 92   |
| Jonas Creek Campground                                      | 96   |
| Campground Research Schedule                                | 103  |
| Campground Observation                                      | 107  |
| The Camper Interview                                        | 114  |
| Management Questionnaire                                    | 117  |
| Observation, Interview and Questionnaire Analysis           | 118  |
| V. DEPRECIATIVE BEHAVIOR AS OBSERVED                        | 120  |
| The camper in general                                       | 120  |
| Depreciative behavior situations                            | 129  |
| Type of equipment used and depreciative behavior            | 134  |



| Chapter                                                                                  | Page    |
|------------------------------------------------------------------------------------------|---------|
| Area of residence and depreciative behavior                                              | 141     |
| Personal characteristics and depreciative behavior                                       | 144     |
| Activities associated with depreciative behavior                                         | 147     |
| Associated motivational characteristics of depreciative behavior                         | 153     |
| The victims of depreciative behavior                                                     | 157     |
| Witness reactions to depreciative behavior                                               | 159     |
| Official actions                                                                         | 161     |
| Rule postings and depreciative behavior                                                  | 163     |
| Some conclusions regarding depreciative behavior as observed                             | 164     |
| <br>VI. CAMPER OPINIONS AND ATTITUDES TOWARDS DEPRECIATIVE BEHAVIOR                      | <br>172 |
| Characteristics of interviewed campers                                                   | 172     |
| Camper opinions                                                                          | 182     |
| Attendant preferences                                                                    | 186     |
| Camper responsibility                                                                    | 188     |
| Camper opinions towards depreciative behavior problems in undeveloped campgrounds        | 190     |
| Camper opinions towards management changes                                               | 192     |
| Camper knowledge of rules, regulations, and laws                                         | 195     |
| Camper attitudes towards depreciative behavior                                           | 200     |
| Affective component of camper attitudes                                                  | 201     |
| Cognitive component of camper attitudes                                                  | 209     |
| Action component of camper attitudes                                                     | 221     |
| Some conclusions regarding camper opinions and attitudes                                 | 229     |
| <br>VII. THE MANAGEMENT VIEWPOINT                                                        | <br>236 |
| Management characteristics and their opinions concerning camper characteristics          | 237     |
| Management opinions                                                                      | 242     |
| Attendant preferences and responsibility                                                 | 244     |
| Management opinions towards behavior problems in undeveloped campgrounds                 | 246     |
| Opinions towards management changes in campgrounds                                       | 247     |
| Management rule knowledge and estimations of camper rule knowledge                       | 248     |
| Manager attitudes and their assessment of camper attitudes towards depreciation behavior | 252     |





| Chapter                                                                                                    | Page |
|------------------------------------------------------------------------------------------------------------|------|
| Affective component of an attitude                                                                         | 252  |
| Cognitive component of an attitude                                                                         | 256  |
| The action component of an attitude                                                                        | 264  |
| The Manager and carrying capacity                                                                          | 268  |
| Some conclusions regarding the management viewpoint                                                        | 270  |
| VIII. DEPRECIATIVE BEHAVIOR: PROBLEMS AND SOLUTIONS                                                        | 276  |
| Major findings                                                                                             | 276  |
| Undeveloped Campgrounds                                                                                    | 284  |
| Carrying capacity and management implications                                                              | 286  |
| Some questions and no answers                                                                              | 293  |
| SELECTED BIBLIOGRAPHY                                                                                      | 296  |
| Appendices                                                                                                 |      |
| I. TYPES OF ACTS CONSTITUTING DEPRECIATIVE BEHAVIOR                                                        | 310  |
| II. INFORMATION AND RULES POSTED IN SECOND VISIT TO EACH CAMPGROUND                                        | 314  |
| III. OBSERVATION REPORT FORMS                                                                              | 316  |
| IV. CAMPER INTERVIEW FORM                                                                                  | 320  |
| V. MANAGEMENT QUESTIONNAIRE                                                                                | 322  |
| VI. PICTURE SERIES USED IN QUESTION NO. 9 CAMPER INTERVIEW AND QUESTION NO. 10 IN MANAGEMENT QUESTIONNAIRE | 340  |
| VII. MANAGEMENT QUESTIONNAIRE CALL BACK LETTERS                                                            | 344  |
| VIII. SUPPLEMENTAL DATA FROM THE CAMPER INTERVIEW                                                          | 347  |
| IX. SUPPLEMENTAL DATA FROM THE MANAGEMENT QUESTIONNAIRE                                                    | 353  |



# LIST OF TABLES

| Table                                                                                  | Page |
|----------------------------------------------------------------------------------------|------|
| 1. Number of visits to Canadian national parks                                         | 10   |
| 2. Percent of Campers Participating in Various Activities by Campground Type . . . . . | 54   |
| 3. Preferred and Used Camping Styles of Developed Campground Users . . . . .           | 63   |
| 4. Northwestern United States Study - Depreciative Acts Observed . . . . .             | 77   |
| 5. Jasper National Park Visitor Attendance . . . . .                                   | 83   |
| 6. Number of Camper-days in Jasper National Park .                                     | 83   |
| 7. Monthly Camper distributions Jasper National Park 1970-71 . . . . .                 | 84   |
| 8. Type of Equipment used by campers in Jasper National Park - 1971 . . . . .          | 85   |
| 9. Origin of Campground Users Jasper National Park - 1971 . . . . .                    | 85   |
| 10. Number of Parties in each campground during research periods. . . . .              | 121  |
| 11. Percentage of camper groups of different sizes during observation period . . . . . | 122  |
| 12. Type of Equipment used by campers . . . . .                                        | 123  |
| 13. Campers' Residence . . . . .                                                       | 125  |
| 14. Percentage of the parties over three in size .                                     | 126  |
| 15. Camper residence by type of equipment used . .                                     | 128  |
| 16. Frequency of Situational depreciative acts observed . . . . .                      | 130  |
| 17. Number of Acts observed during each research period . . . . .                      | 132  |





| Table                                                                                               | Page |
|-----------------------------------------------------------------------------------------------------|------|
| 18. Type of equipment and the percentages of acts committed . . . . .                               | 136  |
| 19. Depreciative Acts committed by day users and campers . . . . .                                  | 137  |
| 20. Percentage distribution of residence areas for campers and offenders . . . . .                  | 141  |
| 21. Percentages of various acts committed by Albertans . . . . .                                    | 143  |
| 22. Types of acts committed by individuals of different age groups . . . . .                        | 146  |
| 23. Associated activity when depreciative acts were committed . . . . .                             | 152  |
| 24. Apparent associated motivational characteristics of depreciative behavior . . . . .             | 154  |
| 25. The victims of depreciative behavior . . . . .                                                  | 158  |
| 26. Witness reactions to depreciative acts . . . . .                                                | 160  |
| 27. Ages of the interviewed campers . . . . .                                                       | 173  |
| 28. Average expected length of stay of interviewed campers . . . . .                                | 175  |
| 29. Type of equipment used by the interviewed campers . . . . .                                     | 176  |
| 30. Residence areas of interviewed campers . . . . .                                                | 178  |
| 31. Have camped in a Canadian national park before? . . . . .                                       | 179  |
| 32. Campers' selected and preferred type of campground . . . . .                                    | 181  |
| 33. Ranking of reason given for liking to camp . . . . .                                            | 343  |
| 34. Why did you select this campground to stay at? . . . . .                                        | 343  |
| 35. Camper preferences for type of campground attendant . . . . .                                   | 186  |
| 36. Camper opinions on their responsibility to help control the behavior of other campers . . . . . | 189  |



| Table                                                                                                                                                | Page |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 37. Percentage of those in each age group responding "never" or "only in severe circumstances" in question sixteen of the camper interview . . . . . | 189  |
| 38. Camper responses to question eleven by residence area . . . . .                                                                                  | 191  |
| 39. Percentage of those responding that there were problems with camper behavior by the average number of days camped per year . . . . .             | 191  |
| 40. Types of problems mentioned by campers who felt that there were problems with camper behavior in the undeveloped campgrounds . .                 | 349  |
| 41. Positive and negative responses to management changes question seventeen in the camper interview . . . . .                                       | 193  |
| 42. Percentage of campers from each residence area making management change suggestions . . .                                                        | 193  |
| 43. Types of changes suggested by campers who felt that certain campground changes were needed                                                       | 350  |
| 44. Rules mentioned by campers as being important when they camp . . . . .                                                                           | 350  |
| 45. Top five rules mentioned by campers . . . . .                                                                                                    | 196  |
| 46. Camper responses to interview picture series                                                                                                     | 198  |
| 47. Distribution of campers' right scores . . . . .                                                                                                  | 199  |
| 48. Camper responses to bother items in question seven of interview . . . . .                                                                        | 202  |
| 49. Range of campers' bother scores . . . . .                                                                                                        | 206  |
| 50. Percentages of camper bother scores by residence areas . . . . .                                                                                 | 207  |
| 51. Camper responses to the approval/disapproval items in question nine of the camper interview . . . . .                                            | 212  |
| 52. Percentage distribution of campers' approval scores . . . . .                                                                                    | 219  |



| Table                                                                                                                                          | Page |
|------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 53. Camper responses to items in the camper involvement score . . . . .                                                                        | 222  |
| 54. Percentages of camper involvement scores for the three campgrounds . . . . .                                                               | 225  |
| 55. Percentage distribution of camper involvement scores by equipment type . . . . .                                                           | 228  |
| 56. Number of years management personnel worked for Canadian National Park Service . . . . .                                                   | 239  |
| 57. Camper Responses and management estimates of camping experience . . . . .                                                                  | 240  |
| 58. Management viewpoints on why campers select the smaller undeveloped campgrounds . . . . .                                                  | 354  |
| 59. Management and camper preferences for campground attendants . . . . .                                                                      | 245  |
| 60. Management and camper responsibility preferences                                                                                           | 245  |
| 61a. Types of problems mentioned by those managers who felt that there were problems with camper behavior in undeveloped campgrounds . . . . . | 354  |
| 61b. Types of problems managers feel campers would suggest if they were aware of depreciative problems in campgrounds . . . . .                | 355  |
| 62a. Types of management changes which managers felt they could suggest . . . . .                                                              | 355  |
| 62b. Campground management changes which managers feel campers might suggest . . . . .                                                         | 356  |
| 63. Management estimations of camper responses to the legality of six activities shown in pictures . . . . .                                   | 251  |
| 64. Management and camper responses to bother score items . . . . .                                                                            | 253  |
| 65. Distribution of management and camper bother scores . . . . .                                                                              | 256  |
| 66. Means and standard deviations of management and camper responses to approval score items                                                   | 257  |





| Table                                                                                                                    | Page |
|--------------------------------------------------------------------------------------------------------------------------|------|
| 67. Distribution of management and camper approval scores . . . . .                                                      | 262  |
| 68. Percentage distribution of high and low approval scores for managers and campers                                     | 263  |
| 69. Average management and camper responses to involvement score items . . . . .                                         | 265  |
| 70. Management and camper distributions of involvement scores . . . . .                                                  | 267  |
| 71. Additional activities which managers felt would bother them . . . . .                                                | 356  |
| 72a. Rules managers felt were important while camping . . . . .                                                          | 357  |
| 72b. Rules managers feel campers would mention as being important . . . . .                                              | 357  |
| 73. Solutions to overcrowding mentioned by managers                                                                      | 358  |
| 74. Solutions offered by managers to help campers become more aware of the national park rules and regulations . . . . . | 358  |



## LIST OF FIGURES

| Figure                                                                                                   | Page |
|----------------------------------------------------------------------------------------------------------|------|
| 1. The man and environment interaction . . . . .                                                         | 3    |
| 2. Down's Attitude and Behavior Model . . . . .                                                          | 39   |
| 3. Down's model of the individual and the spatial<br>environment interaction . . . . .                   | 39   |
| 4. Collin's model of the attitude and behavior<br>relationship . . . . .                                 | 39   |
| 5. Sadler's model of the Perceptual role in the man/<br>environment relationship . . . . .               | 40   |
| 6. Recreation activity typology model . . . . .                                                          | 57   |
| 7. A continuum model of sociability to environment-<br>alism within three types of campgrounds . . . . . | 67   |
| 8. Location of study campgrounds . . . . .                                                               | 88   |
| 9. Map of Rocky River campground . . . . .                                                               | 89   |
| 10. Number of camping parties using Rocky River during<br>1971 . . . . .                                 | 91   |
| 11. Inner ring of campsites at Rocky River . . . . .                                                     | 93   |
| 12. Multiple site occupancy at Rocky River . . . . .                                                     | 93   |
| 13. Map of Mt. Kerkeslin Campground . . . . .                                                            | 94   |
| 14. Kitchen shelter at Mt. Kerkeslin . . . . .                                                           | 95   |
| 15. A metal swivel fireplace box mounted on concrete at<br>Mt. Kerkeslin . . . . .                       | 95   |
| 16. A typical campsite in the upper ring at Mt.<br>Kerkeslin . . . . .                                   | 97   |
| 17. Close site spacing in the upper ring at Mt.<br>Kerkeslin . . . . .                                   | 97   |
| 18. Number of parties using Mt. Kerkeslin during 1971                                                    | 98   |
| 19. Campsites along the south edge of the upper ring<br>at Jonas Creek . . . . .                         | 100  |



| Figure                                                                                              | Page |
|-----------------------------------------------------------------------------------------------------|------|
| 20. Campsites in the inner part of the upper ring<br>at Jonas Creek . . . . .                       | 100  |
| 21. Map of Jonas Creek Campground . . . . .                                                         | 101  |
| 22. Lower ring of sites at Jonas Creek . . . . .                                                    | 102  |
| 23. Number of parties using Jonas Creek during 1971                                                 | 104  |
| 24. Jonas Creek empty in the early afternoon . . .                                                  | 105  |
| 25. Jonas Creek full in the early evening . . . .                                                   | 105  |
| 26. Official signs at Jonas Creek . . . . .                                                         | 110  |
| 27. Official signs at Mt. Kerkeslin, note the stone<br>ring fire to the lower right . . . . .       | 110  |
| 28. Rules posted in kitchen shelter at Jonas Creek                                                  | 111  |
| 29. Rules posted on pit privy door at Jonas Creek                                                   | 111  |
| 30. Rules posted on bulletin board at Mt. Kerkeslin                                                 | 112  |
| 31. A motor home in Rocky River . . . . .                                                           | 112  |
| 32. Campground rule violations . . . . .                                                            | 133  |
| 33. Natural environment damage acts . . . . .                                                       | 133  |
| 34. Privacy violations . . . . .                                                                    | 133  |
| 35. The number of observed acts committed by type of<br>equipment used in the three campgrounds . . | 135  |
| 36. Natural Environment Damage Acts by the type of<br>Equipment . . . . .                           | 139  |
| 37. Acts committed during camp chores . . . . .                                                     | 150  |
| 38. Acts committed while setting up camp . . . . .                                                  | 150  |
| 39. Litter collection from Mt. Kerkeslin campground<br>July 15-20 . . . . .                         | 165  |
| 40. Litter collection from Jonas Creek campground<br>August 25-30 . . . . .                         | 165  |
| 41. Litter collection from Rocky River campground<br>August 16-20 (study half only) . . . . .       | 166  |





| Figure                                                                                         | Page |
|------------------------------------------------------------------------------------------------|------|
| 42. Trench dug by tent camper on July 8 in Jonas Creek . . . . .                               | 170  |
| 43. The same trench from figure 42 photographed on September 5 . . . . .                       | 170  |
| 44. Unburned litter left by a camper in Mt. Kerkeslin campground . . . . .                     | 204  |
| 45. Improvised sites and illegal campers during the peak camping season at Mt. Kerkeslin . . . | 204  |
| 46. Percentage of campers by residence areas receiving bother scores from four to eight        | 208  |
| 47. Distribution of camper approval scores . . .                                               | 218  |
| 48. Distribution of camper involvement scores                                                  | 226  |



## CHAPTER I

### CANADIAN NATIONAL PARKS: THE ISLANDS OF CANADA

The legal establishment of national parks<sup>1</sup> in North America began a little over a hundred years ago and as such they are in many cases the last remaining islands of a once unexploited North America. The United States and Canada were the first countries in the world to set aside lands to be specifically designated as national parks (Harroy, 1968). Over the years the importance of these areas has changed from that of unique and remote places which few people ever visited to consideration as one of the key recreational resources of both Canada and the United States. As more land is developed for economic purposes less land becomes available for the establishment of new national parks, and this coupled with increasing recreational demands means the pressures being exerted on those existing parks becomes greater. The ability to alleviate those pressures is restricted by the inherent contradiction in the policy statements under which the park systems of Canada and the United States are governed. Couched in similar terms the

---

<sup>1</sup>For the purposes of this thesis a national park will be defined as stated by the Canadian National Park Service in their policy statement which defines a national park as, "areas of outstanding natural features (scenery, wilderness, geography, geology, or flora and fauna) which should be preserved forever as part of the natural heritage for the benefit, education and enjoyment of present and future generations" (National and Historic Parks Branch, 1969:3).



policy statements of both countries call for the national parks to be used for the benefit, education, and enjoyment of their citizens, yet leaving them unimpaired for future generations. The difficulty in adhering to both parts of such a policy has become painfully obvious in some parks as the number of visitors per year continually increases at an accelerated pace. The dilemma faced by many of the North American national parks is whether to accommodate the increasing visitors and their recreation demands or to limit the recreational impact that will be allowed in the parks. The first alternative in many cases leads to the complete change from a natural area to an almost urban type environment. The gradual deterioration of national parks under the strain of too great a recreational impact has been more apparent in the United States than it has been in Canada, simply because of the greater numbers pouring into certain popular parks such as Yellowstone, Yosemite, and Mesa Verde. Some Canadian national parks however, are beginning to show signs of fatigue common to the United States parks, the most notable of which are Banff and Jasper in the west and Terra Nova and Cape Breton Highlands in the east. It may already be too late for a Canadian policy of watch and see what happens in the United States. The problem is an urgent one that can only be aggravated by time.

There are many writers who have called for a much clearer definition of national park policies (Eichhorn, 1964;



Dasman, 1968; Clawson, 1968; Henderson, 1968) and for the setting of carrying capacity limits for various national parks. In taking a critical look at Canada's National Parks Stenton notes that, "Most officials agree that more research is needed to find out how to manage human impact, and to determine carrying capacity of a national park so it can remain essentially natural" (Stenton, 1964:188). In order to understand what the carrying capacity of any area may be, certain aspects must first be researched. It is necessary to understand: 1) how the individual affects the natural environment ecologically, 2) how the natural environment affects the individual's experience, and 3) how the individual's activities affect other individuals within the social as opposed to the natural environment. The interchange could be diagrammed as below.

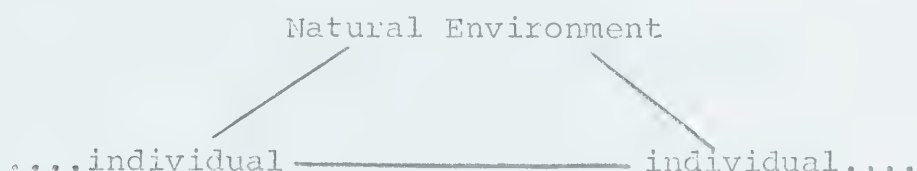


Figure 1. The Man and Environment Interaction

The system can naturally be applied to individuals or to groups of people acting as a whole. The study presented in this thesis deals with the first and third parts of the above interaction. As will be shown later, a great deal of past research devoted to the determination of recreational carrying capacities has been concerned with the first two parts of the





interaction, especially how people affect the natural environment. Within the recreation situation in a national park one of the main areas of concern is the accommodation of overnight visitors in campgrounds. At one time campgrounds were established for the purpose of concentrating visitors in certain areas of the park where they could be adequately supervised. In recent times the use of the campground has become a recreational activity within itself which has attracted many different types of campers. Either by design or by accident different types of campgrounds have developed within national parks and elsewhere in North America. This localization of people within parts of a national park offers problems and unique opportunities to study the effects of the man/environment relationship.

### The Canadian National Park System

#### Historic Roots

The current director of the National and Historic Parks Branch of the Department of Indian Affairs and Northern Development has said, ". . . owing to our circumstances and history, and the general availability of the outdoors which formerly prevailed, it should be recognized that parks to Canadians came pretty much as an afterthought, not as a high priority" (Nicol, 1968:37). As a growing and developing nation Canada has had other more pressing political



programs to deal with than the creation of a national park system.

The first national park was set up in 1885 which encompassed an area of ten square miles around the hot springs at Banff Station, Alberta. Originally set up for the sanitary benefits of the hot springs this area soon was established as the first Canadian National Park (under the Rocky Mountain Parks Act of Canada, 1887). Other parks in the same area were soon created and by 1911 there were five national parks in the Canadian Rockies. Also in 1911 the Dominion Forest Reserves and Parks Act took parks administration from the Forestry Branch of the Canadian government and made a Commissioner of Dominion Parks the responsible official for Canadian National Parks. Contained within this act was the authorization to establish other areas within the Canadian Forest Reserves as Dominion Parks, "maintained and made use of as public parks and pleasure grounds for the benefit, advantage, and enjoyment of the people of Canada" (Dominion Forest Reserves and Parks Act, Chapter 10, 1-2 George V, 1911).

Very early it was realized by the first Commissioner of Dominion Parks that if support was to be generated from Parliament for the financial upkeep of national parks then some leverage would have to be obtained. This was found in the form of appeals to the benefits of tourism in the national parks, which were not hard to establish with the



use of figures from the Canadian railways. During the period after 1911 the "public park and pleasure ground" aspect of Canadian National Parks gained in popularity. The railway resort hotels of Banff, Lake Louise, Field, Glacier, and Jasper were great attractions for the tourist dollar. The Dominion Parks Administration fostered the idea of parks as playgrounds with large travel promotion programs which featured the national parks as a major attraction. It was during this period that permanent townsites were established in some parks such as Banff and Jasper. The problems of meeting the two objectives of tourism and park preservation began in these early days.

By 1930 there were seventeen Canadian national parks. Due to the ease of obtaining lands for national parks prior to this date in western Canada only three of these parks were in eastern Canada (with a total of only eleven square miles). After 1930 the western provinces of Canada assumed control over their own lands and the establishment of new national parks assumed a much slower pace. It was in 1930 that the National Parks Act was passed which set up the national parks under a distinct administrative entity and set out the provisions under which they were to be managed. (For a very complete list of legislation pertaining to the Canadian National Parks prior to and after 1930 see Nicol, 1968:51-2). Since this time more parks have been established in the eastern provinces of Canada (Gros Morne, Kejimikujik, Forillon, Pukashwa, and Kouchibouguac) and recently in the northwestern





territories (Kluane, Nahanni). Within the Canadian National Park system there are also nineteen National Historic Parks and fifteen National Historic Sites. The process of creating a Canadian national park is a rather slow and involved one, consequently additions to the system take careful deliberation and often a great deal of time.

Although the national parks of Canada may have come as an afterthought to many Canadians, and to some degree this is still the case, in the last few years certain Canadians have become aware of the need for an informed viewpoint on national parks (Henderson, 1968:888). National and Historic Parks Branch Director Nicol has noted that the beginning of a public national parks movement started with the interest of such conservation groups as the National and Provincial Parks Association. With such well publicized issues as the Village Lake Louise project in Banff National Park it appears that at least part of the Canadian public has become more aware of the Canadian national parks and their problems.

### Park Policy

As stated previously it is the National Parks Act of 1930 under which the Canadian national parks are administered. The often quoted statement which outlines the general purposes of the national parks states that,



The Parks are hereby dedicated to the people of Canada for their benefit, education and enjoyment, subject to the provisions of this Act and the Regulations, and such Parks shall be maintained and made use of so as to leave them unimpaired for the enjoyment of future generations (National Parks Act, 1930:20-21).

It is plainly obvious that such a statement allows for a wide interpretation of the purpose of a national park. The problem inherent in such a statement is that when the former part of the statement assumes predominance over the latter, the whole being of a national park is threatened. It is understandable that at the time the policy was formulated it was not so obvious that the use of the national parks would reach such overwhelming proportions. Since the first national park policy was formulated some clarification has taken place (National and Historic Parks Branch, 1969). A policy statement issued in 1964 placed new stress on the preservation aspect of national park policy. However, in many instances the directive statements were blunted by such phrases as, "but if essential," and "such impairment should be accepted only if it is justified" (Henderson, 1968:893). It does appear that there are pressures countering the forces which are working to establish harmony between people and the parks' natural environment.

Clawson, in writing about the development of recreation in North America and its implications for national parks (1968), notes that one can refer to mass markets for outdoor recreation commodities and that mass outdoor recreation can be



expected to invade the national parks with the resulting danger that the parks will lose their unique value. Although overuse and the invasion by the mass recreational market appears to be more of a problem in the United States there are indications that Canada too may soon risk the loss of some of her most unique resources, the national parks.

### Present Use, Overuse, and Misuse

During the railroad era (1885-1925) the amount of visitation to the Canadian mountain parks was minimal. Then only the well-to-do could afford the time and the expense of a trip to a Rocky Mountain national park. The roads were poor and the facilities sparse for those who desired to undertake an automobile trip to the Rocky Mountain parks. The change in visitation patterns did not change overnight, nor did they change solely due to increased desires to only visit the national parks. After World War II a great change took place in the living patterns of a great many North Americans. Some of the factors underlying the increased demand for recreation space are as follows (Clawson, 1968):

- 1) population increases and the urban movement,
- 2) real income increases,
- 3) more leisure time, and
- ) improved transportation facilities.

No one of these factors is directly responsible for increased visitation to national parks, but the interaction of these factors has created a demand which at the current time shows



little sign of abating.

Predictions made in past years of future visitation rates to national parks have proven in many cases to be inadequate. It appears (Nicol, 1968:45) that visitation to Canadian national parks increases ten percent per year or doubles about every seven and one-half years. The following table clearly indicates that yearly visits to Canadian National Parks have increased substantially.

TABLE 1

Number of Visits to Canadian National Parks\*

---

|                   |                   |
|-------------------|-------------------|
| 1966 - 9,845,283  | 1969 - 11,855,579 |
| 1967 - 11,367,912 | 1970 - 12,390,940 |
| 1968 - 10,968,169 | 1971 - 13,607,234 |

---

\*excluding National Historic Parks and Sites.

Source: Statistics Canada (1970-71 and 1972) Canada Yearbook.  
Information Canada, Ottawa.

Until recently these increasing figures meant that in many areas facilities not previously used to their fullest extent such as campgrounds and picnic areas were gradually assuming their potential loads. Visitation figures must be used carefully, however, as a visitor includes anyone passing through the gates of a national park whether he actually uses any of the facilities there or not. Currently during the





peak summer months of July and August the Rocky Mountain national parks have more camping parties than there are sites to accommodate them (National and Historic Parks Branch, 1970b), while other day use facilities are showing the signs of increased wear and tear. Although the parks of Canada are for the benefit, education, and enjoyment of all Canadians there comes a point at which one must ask whether or not the experience a Canadian gains in a national park is unique and in keeping with the other purpose of national parks--to leave them unimpaired. At some point changes will have to be made as any use implies a certain amount of inevitable change in the natural environment, but how much change is too much? The argument has been raised that the many visitors who are pouring into the Canadian national parks are urban and that they bring with them their urban values and problems (Stenton, 1969:180). Larger serviced campgrounds have been built to cope with the numbers of campers who now demand services and other social amenities not previously afforded to national park campgrounds. The recreational camper is a key figure in national park planning and as his numbers increase so do the problems of over use.

There can be little doubt that automobile camping itself makes heavy demands on the natural resources of a national park, yet this is an activity in which a great many taxpaying citizens feel they have a right to engage. In the recent clarification of Canadian National Park policy it was stated that,



Camping is an activity closely related to the basic purposes of National Parks. Facilities and regulations for camping should therefore be carefully planned to encourage this form of park use without sacrificing the natural park values that the camper has come to enjoy (National and Historic Parks Branch, 1970b:10).

Clearly camping is considered by the Canadian National Park Service to be a desirable activity within a national park. However, as has been noted by Knetsch (1968), one cannot equate the value of the supply of recreation areas with the numbers that will use them. It has been assumed by many that if a person camps in a national park he is gaining a unique experience in keeping with the enjoyment of the natural area for which the park was provided. The evidence (which will be discussed in greater detail later) does not support such an assumption. There are those who feel that the experience gained by many national park visitors is not unique and could be obtained in other recreational areas (Johnson, 1967 and Stenton, 1969). It has been suggested that a national park is not just an area where a person can "get away from it all" (Henderson, 1968:900). Even though there are indications that today's national park visitor can tolerate rather high degrees of crowding (Clawson, 1968:63) this may not be the most desirable use of unique natural resources. Lucas explains that although the desires of the user are an essential ingredient in the formulation of park policy this does not mean that park policy needs to be dictated by the present visitor's attitudes as they may be shortsighted, selfish, or in conflict with the ideas of others. Lucas



goes on to state that, "High quality is or should be, the essence of the visitor's experience in a national park" (1968:915).

The problems of overuse and misuse are related not only to the sheer numbers who attempt to gain benefit from the national parks, but also to the type of activities and uses which park visitors demand. In many ways Canadians regard their national parks as the central asset of their recreation resources. Often this has meant that activities which could take place in other areas of lower recreation quality are being pursued in some of the highest quality natural areas that Canada can provide. A national park, although created for people, simply cannot be all things to all people (Dasman, 1968). If urban areas are places from which people need to escape and national parks are to be offered as a solution it is possible that the ills of the urban environment are not cured, but only transferred to another setting (Hope, 1971). The indications are to the contrary that the recreational camper is seeking a total escape from his every day life for he brings with him all the conveniences of home, his urban social patterns, and values. The experience being gained from such camping is not to be judged, but rather to be understood. From the past patterns of Canadian national park use it seems apparent that the role the parks should play in the lives of Canadians must be more clearly delineated. This delineation has





importance beyond the obvious for as Eichhorn has noted,

The changes which take place in the environment of national parks are an indication of the future of North American environments. What happens here will show the values each generation places on natural beauty, and the sacrifice each is willing to make in deference to the next (1968:341).

### Solution to Overuse and Misuse

Within both the United States and Canada the problems of overuse and misuse have been recognized and certain steps have been taken. Within Canada this has included: 1) a clearer formulation of park policies, 2) the addition of new parks in eastern Canada to even out the previous geographical imbalance in the system, and 3) the development of master plans for each of Canada's National Parks. The last of these three steps includes plans to zone areas of each park according to the use to which that area is best suited. Other solutions which have been suggested for the future are the establishment of broad recreation policies into which national parks will be fitted and the addition of more varied types of parks (National and Historic Parks Branch, 1969), such as national shorelines, recreation areas, and historic sites. Most of these solutions, however, do not directly confront the issue. National parks can be zoned, enlarged, redrawn, developed, established closer to urban areas, revitalized with additional staff, but they will not be radically changed from their role unless other solutions are considered.



Many of the other more drastic solutions which have been suggested involve the restriction of the number of visitors allowed in the park, especially in reference to overnight use. Some states in the United States have tried reservation systems with a fair degree of success (e.g. Oregon). Quota systems have been used in other areas for the restriction of either material goods or people. Some feel that only day use should be allowed in a national park (Clawson, 1968) with a much greater emphasis being placed on the development of visitor facilities outside the park boundaries. Solutions of this type are similar to some of those mentioned above in that they involve relatively simple manipulations of regulatory functions. Other solutions which may offer the best results in the long run are not so clear cut.

Two of these solutions are education and carrying capacity. In the former the role of the national park is changed in the eyes of the public. Henderson, the executive director of the National and Provincial Parks Association of Canada, feels that public education regarding the unique value of Canada's National Parks may help prevent the heavy overuse and misuse of the parks. He states that national parks have, ". . . values that transcend their use as recreational areas in the ordinary sense" (Henderson, 1968:900) and that the public can be made aware of this. This view of a national park can enhance its value and make



its potential benefit much greater. Education which attempts to change currently held opinions or attitudes is not easily accomplished and would involve not only the general public, but government officials as well. The establishment of carrying capacity limits, no less of a task than public education, can be considered as an alternative or as a complimentary solution. The concept of carrying capacity basically involves the determination of acceptable limits of use for certain areas. Inherent with the setting of capacity limits is the necessity of selecting a priori parameters. When carrying capacity limits are being set in a man/environment situation, such as in the case of recreation, there are two determining factors--the ecological and the social. An area may not be able to tolerate large numbers of people before deteriorating substantially in quality. However, the people using the area may not be bothered by either the numbers of other people engaging in the same activity or the deterioration of the natural environment. This situation may work in reverse and people will be bothered by overcrowding and natural environment deterioration but, whatever the direction, some degree of decision-making will have to take place before limits are set. Within a national park different areas will have varying capacity limits depending on the individual uses to which each part of the park is intended. The determination of these limits is not an easy task and they require prior policy decisions as well as a great deal of research.



Whichever solution or combination of solutions one decides is best, one fact is fairly obvious from the outset. Although it is known that many Canadian National Parks are suffering from overuse and misuse, research work within national parks on these problems is very sparse indeed. If ecological research on the effects of heavy visitation patterns is sparse, research on the attitudes and opinions of park visitors and management is even more so. Of the work which has been done on the perception of the recreationist (especially the camper and wilderness user) very little of it has been related specifically to the problems in national parks.

In order to obtain a complete perspective of the situation facing national parks, research needs to be conducted concerning not only the ecological effects of overuse and misuse, but the effects that these problems have upon the visitor in the parks. In referring to what he feels are the research needs of national parks Lucas has explained that,

Even with the best survey techniques, what people say does not always indicate what they would actually do. Attitudes and perceptions need to be analyzed and interpreted in a broader context and related to ecological knowledge and park objectives, but they cannot be ignored (1968:912).

This statement makes it clear that research on the park user needs to be of a twofold nature: what the user does in the park and how he feels about the park. This type of research is essential for the solving of overuse and misuse problems





because it may be assumed incorrectly that the visitor is unaware of the problems that his behavior may create for both other people and the natural environment. In order to determine what is acceptable and not acceptable in a Canadian national park more research is needed on the ecological aspects of visitor use and the social aspects. If the park user is to help determine the role that national parks will play in Canada then more needs to be known concerning his attitudes and perception before any solution to overuse or misuse can work successfully.

### The Study Focus

This particular study, which would be primarily defined as exploratory in that emphasis was placed on the establishment of trends and general relationships, is focused on one particular aspect of the man-environment relationship. An attempt was made in three undeveloped automobile highway campgrounds to determine the extent to which campers participated in behavior which was contrary to the laws, regulations, and rules which applied within a Canadian national park campground. This type of behavior is referred to as depreciative behavior because it has the potential to detract from both the natural environment and from the recreational experience of the camper. Three smaller undeveloped campgrounds in Jasper National Park were selected for this study as the research areas in which certain techniques were brought to bear upon the depreciative behavior of campers. It was felt that the



establishment of carrying capacity limits offered a great deal of benefit to the future management of Canada's national parks and that an exploratory study on the types and relative amounts of depreciative behavior occurring in campgrounds as well as an assessment of camper and management viewpoints towards depreciative behavior would do much to help by throwing some light on the initial problems involved with the social aspects of carrying capacity. How campers feel about the depreciative behavior of other campers may reveal that what one person considers depreciative behavior the other may not, while certain kinds of behavior may be considered depreciative by all campers. Before management personnel can begin to solve some of the problems facing national parks such as overuse and misuse of campgrounds information must be made available which clearly points out how the camper feels about the social environment especially that part which may detract from his experiences in a national park campground. Such information would also be essential if carrying capacity limits were to be adopted in national parks.

The major objectives of this study are focused on a better understanding of the depreciative aspects of a camper's social environment in a national park campground as well as the viewpoints of the management personnel responsible for the well being of the park and the camper. A primary objective was to gain some insight into the relative amounts



and types of depreciative behavior which occurred in the three campgrounds. In this sense depreciative behavior was defined as all behavior which was contrary to the rules, regulations, and laws of the Canadian national parks (although in the final analysis some behavior was considered depreciative which did not appear in specific regulations or rules). The determination of the amount and kinds of depreciative behavior which occurred in the campgrounds was to be used as a base from which it could be determined if the camper was aware of behavior which actually did occur. Based on the assumption that a certain amount of depreciative behavior would occur to was the second objective of this study to gain a greater understanding of the attitudes and opinions of the campers in the three campgrounds towards depreciative behavior and to determine if they were aware or not that such behavior did occur in the campgrounds. It was thought that management personnel would view the same behavior in a strict manner and that they would tend to estimate the opinions and attitudes of the camper based on their own occupational positions and experiences. A fourth and fifth objective of this study were to make some estimation of the effects which: a) the posting of rules and regulations in the campgrounds might have on the depreciative behavior observed and the opinions and attitudes of campers, and b) the distance of the various campgrounds from easy access by residents from a large metropolitan center might have on the actual





depreciative behavior observed and the attitudes and opinions of campers towards that behavior. Major emphasis was placed on the first three objectives and one might note that the main thrust of this study was to find out if any discrepancies existed between the depreciative behavior in three undeveloped national park campgrounds as it is observed and the attitudes and opinions held in regard to that same behavior.

### Thesis Organization

Another objective of this study is to place the research into the context of other research which has been conducted in the major areas of concern to this project. The first chapter discussed the Canadian National Park System and some of the problems facing national parks in North America. Overuse and misuse were discussed along with some of the solutions which may alleviate these problems. The research undertaken in this study was fitted into the context of these social problems and related to the solution aspects which may aid management personnel to attain a better understanding of the social problems facing their national park camping clientele. Chapter II will be devoted to a discussion of terms in regards to attitudes, opinions, and perceptions as well as the placement of attitude and perception research into geography and recreation research. Since little descriptive data was gathered in respect to camper characteristics



and their attitudes towards camping in general Chapter III will be centered on a discussion of campers. An attempt will be made to assess the type of campers who frequent various types of campgrounds, including the wilderness user, so that a better understanding can be gained of the type of campers who are likely to frequent a nationally known park, and especially those who might be expected to use undeveloped automobile campgrounds. Since the results of this study have their greatest relevance to the establishment of carrying capacity limits, the final section of Chapter III will be concerned with past research efforts of value to the establishment of such limits as well as the pertinent research which has been carried out on depreciative behavior. In Chapter IV a closer look will be taken at Jasper National Park and its visitation and camper patterns, as well as the specific campgrounds used in this study. Although some of the mechanics of the research techniques are discussed in the chapters dealing with the data analysis, basic methodology, and sample selection will also be dealt with in Chapter IV. Chapter V contains the data on depreciative behavior as observed and a discussion of the fit between camper characteristics during data gathering days and those campers involved in depreciative acts. The campers' attitudes and opinions towards depreciative behavior will be dealt with in Chapter VI. Although time did not permit the interviewing of the personnel in the park a mail questionnaire



was used to determine the management viewpoint (both his own and what he feels are the campers') on depreciative behavior. The data from this questionnaire will be presented in Chapter VII. The final chapter of the thesis is devoted to the task of summarizing the results of the study and indicating the implications of these results for the future management of Canadian national parks and for future research in this area.



## CHAPTER II

### ATTITUDE, OPINION, AND PERCEPTION STUDY

The question of how campers react to the social and natural environments around them is related to the broader topic involving how man perceives his environment. No topic could be more closely related to geography than that of man and environment relationships. This chapter begins with a look at the development of environmental perception as a research area in geography. It contains a discussion of how geographers have helped to develop this area into a research frontier (Ackerman, 1963) which has generated interesting discussion and debate. But geographers have not made a great deal of effort to define the terms which they have often used so freely. The theory of attitudes and perceptions comes from other disciplines, most notably psychology and social psychology. The following section of this chapter is devoted to the theory developed in these disciplines. It is felt that as many geographers are part of the research frontiers as explained by Ackerman, that great attention should be placed on a comprehensive understanding of attitudes and perceptions. This is essential when one considers that most of the research techniques used in the study of man/environment relationships originate in other social science disciplines and are borrowed.





The background having been set, the discussion narrows to the relationship between recreation research and geography. Recreation, being a field<sup>1</sup> much like environmental perception, is shared by other disciplines and some of the major contributions to environment perception in recreation follow the section on recreational geography.

### Environmental Perception Study in Geography

The man-environment relationship has been an integral part of geographical study for many years. In 1864 George Perkins Marsh published his book Man and Nature; or Physical Geography as Modified by Human Actions which dealt with the intricate and far reaching effects of man's activities on the earth. As early as 1923 a geographer recommended studying geography as human ecology or human adjustment to specific natural environments (Barrows, 1923). The possibilistic view of man in his environment is a fairly modern manifestation in geography. The historical geographers were the first to recognize the importance of perception in the study of geography. The environmental determinism era was hardly conducive to the development of humanistic elements in geographical analysis and it wasn't until the rise of possibilism that these elements began to take form. Febvre (1932:236) points this out when he states,

---

<sup>1</sup>A field is defined here as a general sphere of interest or activity shared by researchers in a number of different disciplines.



There are no necessities, but everywhere possibilities; and man, as master of the possibilities, is the judge of their use. This, by the reversal which it involves, puts man in the first place - man, and no longer the earth, nor the influence of climate, nor the determinant conditions of localities.

Researchers such as Webb (1931:152-60), in his historical work on the woodsman's negative reaction to the environment of the Great Plains, used the original documents to shed light on the evolution of the environment that these people had created. Sauer (1941:10) also emphasized the need to study environmental perception in historical geography. In 1952 a symposium dedicated to Marsh, Man's Role in Shaping the Earth (Thomas, 1956), a series of papers were presented which brought the subject area further forward. Glacken's paper (1956) traced man's attitudes and ideas toward the environment from the first written material to the present. In 1947 John Wright in his Presidential address to the American Association of Geographers advocated the idea of "terrae incognitae" or the unknown world of what goes on in men's minds. He saw two realities--the objective and the subjective. There could also be two kinds of subjectivity which involve right and wrong pictures of reality. In a discussion of historical geography and the concept of the behavioral environment Kirk (1952) was the first geographer to refer to concepts similar to those in use today. He advocated consideration of the environment,

. . . . not only as it was at various dates, but as it was observed and thought to be, for it is in this



behavioral environment that physical features acquire values and potentialities which attract or repel human action (1952:159).

Kirk further suggested that a region be thought of in terms of more than just its physical aspects, but also in terms of the environment as seen in the minds of the people.

A major impetus for additional study of environmental perception was given in an article by Lowenthal (1961) who voiced the opinion that the subject matter of geography approximates the world of general disclosure, the everyday life of man on earth. He reviewed the current and past ideas of personal and group perceptions of the world. In another paper, Kirk expressed the view that geography should be concentrating on man's perception of his environment (Kirk, 1963). As the above papers focused on the importance of environmental perception, it was found that the use of the holistic approach dealing with whole societies and cultures was too complicated when dealing with complex societies and consequently in the late 1950's and early 1960's geographers turned to examining selected aspects of environmental perception. The first works of this type were those of White (1962), Kates (1962), and Burton and Kates (1964) and their associates in hazard perception study at the University of Chicago. Even at the present time the work of these men provides a basic core of geographical perception research. Two later geographers publishing from Chicago, Saarinen (1966) and Sonnenfeld (1965), are considered to



have produced some of the most successful integrative perception studies completed within the 1960's decade. They both used a combination of psychological and geographical study to produce a comprehensive view of man/environment relations.

Within more recent years there has been a proliferation of other types of geographical studies embodying the perceptual process in the study of behavior. One of these areas is that of spatial patterns and diffusion. The work of Gould (1966) on mental maps involves perceived environmental elements as they affect residential desirability. The use of one of the geographer's primary tools, the map, to discern perceptual elements is a method which has applications beyond the specific problems with which Gould directly deals. A similar problem was dealt with by Wolpert (1964) who worked on the way in which the decision making process affects spatial patterns. Within a more restricted range is the work of researchers dealing with the perceptual process and urbanization. Foremost among this work is that of Lynch (1960) who concentrated on the images that inhabitants held of the different cities in which they lived by the use of image maps to show how his respondents perceived the city. Concentrating on the perception of urban transportation and its relationship to planning Appleyard, Lynch, and Meyer (1964) have studied the view from the road, while Carr and Schissler (1969) looked at city road systems through the eyes of those using them.





Other types of geographical studies which deal with environmental perception are those which approach their subject matter from an examination of documents, writings, and paintings. Lowenthal and Prince have looked at the English landscape in this manner (1964 and 1965). This type of phenomenological approach is most prevalent in the work of Yi-Fu Tuan (1971a, 1971b). This approach differs from past approaches in that it takes a rather holistic view of the man/environment relationship from a rather subjective point of view.

A collection of articles which contains examples of the above types of perception studies within geography is that edited by Lowenthal (1967). In 1972 a second set of perception papers, again edited by Lowenthal (1972a), appeared in Environment and Behavior. This collection contains some papers by the same authors as the first, but generally they indicate the type of work being done currently. One other collection of papers worth mentioning is that edited by Sewell and Burton (1971) which relates perceptions and attitudes to resource management study and contains a fine section on concepts, theory, and techniques.

Although the development of perception theory and methodology has been largely left to other disciplines, some studies have appeared which attempt to theorize about perception within geography. Brookfield's (1969) paper on the environment as perceived attempts to theorize about the nature of the perception/behavior process and how this relates to



geography. He feels that the decision-making process profoundly affects the spatial/behavior patterns which emerge on the earth because the decision-maker bases his decisions on the environment as perceived, not as it is. The action produced from these decisions is played out in the real environment and hence produces certain spatial patterns. He later goes on to state that it is the most important job of geographers to relate environmental perception to reality and therefore to provide accurate analysis of the man/environment relationships (1969:75). In a similar vein Downs (1970) in his review of geographical space perception feels that the behavioral revolution has much to offer in the clarification of human spatial behavior. The study of how man perceives his environment helps to clarify spatial behavior and changes the basic scheme for analysis from environment/spatial behavior to that of environment/man/spatial behavior which throws more emphasis on the underlying process rather than on the spatial patterns that behavior produces (Downs, 1970:70). Saarinen (1969) also agrees that a major part of the geographical realm of research lies with discerning the man/environment system, however, he foresees a new type of geography based on the fact that geographers are no longer studying environmental perception in only broad, general, and subjective ways, but are looking directly at people to discern their perception of environment.

It can be seen from the above that the way in which



perception studies fit into the geographical milieu depends greatly upon how geography itself is defined. It is sufficient to say that many geographers have accepted environmental perception as part of their definition of geography whether it be spatial pattern oriented, man/environment related, or regionally defined. Reviews of the field of perception in geography are not profuse. Saarinen's (1969) review is arranged according to the scale of the study, from personal space and room geography to the world view. This review and the one by Wood (1970) point out the many diverse areas into which environmental perception has gone in geography. Lowenthal (1972) in his review of interdisciplinary research in perception and behavior has observed that,

Contributions to the understanding of environmental perception and behavior have increased rapidly in recent years. . . . But as a number of recent overviews indicate, the field as a whole remains essentially unorganized and disjointed (1972b:333).

He goes on to state that work in this area falls short of its full potential because it lacks commonly accepted definitions, objectives, and techniques for applying research results to the needs of environmental planning and decision making.

"Above all, studies in this field now require a more systematically organized theoretical base" (Lowenthal, 1972b:333).

A few of the geographers who have attempted a definition of attitudes and perceptions are White (1966), Sadler (1971), and Schiff (1971). However, the main body of knowledge concerning the formation of attitudes and opinions comes from





psychology. The problems of forming a theoretical base are related partially to an inability for the disciplines to communicate with each other as to terms which when borrowed may change their definitions. A more systematically organized theoretical base would help not only to prevent changing term definitions, but might also aid in the establishment of accepted relationships between the various aspects of attitudes and perception as well as aid in past research efforts. Within this study some attempt will be made to define the terms which will be used and their relationships to each other.

#### Definitions from the Social Sciences

"Problems of attitude and attitude change are urgent and crucial today, perhaps more than in previous periods of human history" (Sherif and Sherif, 1970:294). This quote from two fairly prominent psychologists points out that the necessity of understanding attitudes has been important in the past, but that it is even more important today. They go on to note that man's mastery over the physical environment has created a new environment in which the attitudes of individuals effects a wider range of people and physical space than ever before. This desire to understand attitude formulation has a great deal to do with the desire to predict man's behavior. Carl Rogers has voiced optimism that". . . . psychological science will advance along the lines of discovering the lawful order which exists in human behavior and





experience--in interpersonal relationships, in learning, in perception, and other psychological events" (1970:11).

Research so far has not been successful in substantiating this optimism. Research in this field has extended over a period of three decades. One of the earliest articles in the field was that written by Allport in 1935. Since then many articles and books have been written on attitudes and perception. Within recent times there has been a great expansion of the realm of attitude research into the different social sciences. Sociologists have been active in attitude research especially with the beginnings of social psychology. The focus here is the study of the individual in society, his attitudes and behavior as they relate to his interactions within different groups. Other fields which have even more recently entered into attitudinal research are those of anthropology, political science, history, and geography.

Since Allport's article on attitudes many different definitions of attitude have been put forward. The immediate problem is that the attitudinal formation process cannot be directly observed. The early approach to this problem was to derive the theory from introspection of one's own mind or to record the verbal comments of a trained college-subject (Feifel, 1970:29-31). However, as the successes of the hard sciences came to light the social sciences began to emulate the scientific method of such disciplines as physics. There developed a shift from the older introspective philosophical



methods to methods which were operationally definable. At the theoretical level the tenets of logical positivism were accepted. The search for theory and laws in attitudinal study became one of inference from the directly observable (Bridgeman, 1927). Behavior became the criterion from which attitude theory was derived, which of course assumed that the two were directly related.

If there are a multitude of theories on attitude formulation one might then ask if these are related. Osgood, Suci, and Tannenbaum in their article on attitude measurement seem to feel that some consistency and agreement is evident, ". . . . particularly with respect to the major properties that attitudes are assumed to possess" (1970:227). They state that attitudes are:

- 1) learned and implicit and are inferred states of the organism presumably acquired in much the same manner that other such internally learned activity is acquired,
- 2) predispositions to respond, but are distinguished from the other states of readiness in that they predispose toward an evaluative response,
- 3) implicit processes having reciprocally antagonistic properties varying in intensity (i.e. attitudes have directions and intensities which range from one end of a continuum to the other).

These properties place attitudes as internal mediators that operate between most stimulus and response patterns. Following closely to this assessment of attitudinal properties is a definition taken from a basic social psychology text book which divides an attitude into three distinct components centered around a single object or set of objects: 1) the cognitive component (beliefs), 2) the affective or feeling



component, and 3) the action tendency or disposition component (Krutch, Crutchfield, and Ballachey, 1962: 137-147). The cognitive component consists of the individual's beliefs, which need not be correct, about the object(s) of the attitude. This also includes his evaluations (good-bad) about the object(s). The affective component consists of an individual's feelings regarding the object(s)--his likes and dislikes. The action component is that part of an attitude which when combined with the other two components predisposes an individual to behave in a certain manner. This division of attitude into the cognitive, emotive and action components is fairly common to attitude definitions as is the idea that attitudes are learned predispositions to act depending on the external circumstances (Cook and Selltiz, 1970-23-4). A fairly recent and comprehensive definition which varies from the above is that of Fishbein (1967a:257-266) who differentiates between beliefs and attitudes. Using the same three components as mentioned above he defines the attitude as a learned predisposition to respond to an object or class of objects in a favorable or unfavorable way. He only includes the emotive (effective) component as attitude. Beliefs consist of the other two components (cognitive and action) which regulate what a person thinks about the relations between the object of belief and any other object, concept, value, or goal, and what types of actions should be taken with regard to them. Fishbein also divides beliefs into two types: beliefs in the existence of the object and beliefs



about the nature of the object and its relationships (opinions). In essence he places attitudes on an emotive (feelings of liking or disliking) dimension and beliefs on a probability dimension. This definition of attitude components is well thought out. It may be that it is a theory based on the information revealed by the current methodology, rather than a theory which is based on reality (i.e. the theory only fits the tests made of it). Two other aspects of attitudes which have great importance to their measurement are those of direction and magnitude. The direction refers to whether or not the attitude is positive or negative, while the magnitude refers to the degree to which the attitude is positive or negative.

One other distinction which needs to be made is that between perception and attitude. Although an actual definition of perception is not made an attempt is made to differentiate what perceptions are concerned with as apart from an attitude. The physiological patterns of perception are not of interest here, but what Schiff (1971) refers to as social perception. She defines social perception as being concerned with,

. . . . the impression one has of a social stimulus or set of stimuli, as that impression is modified by the perceiver's past experience in general, his previous experience with that same or similar stimuli and the individual's state at the moment he is viewing the stimulus of interest (Schiff, 1971:3).

When perception is used to refer to a set of beliefs about





environmental events not present or experienced by the individual, then it is erroneously used. Perception refers only to situations in which the stimulus is physically present or was recently administered in an experimental situation. The scope of perception is smaller than that of an attitude and perceptions are more related to specific stimulus while attitudes are related to a class of stimuli. Perception affects attitudes and attitudes affect perception, but they are not the same, although cognition plays a role in both of them. In this respect an opinion is not perception, but a belief and part of an attitude.

One technique which has been used to summarize attitude formulation and behavior systems has been that of visual diagrams. As long as one keeps in mind the limitations that these models possess as noted by Feigl then these have a real value. Feigl states that these models are only "intellectual scaffolding" (1970:47) which attempt to give factual content to theories which are unvisualizable. He notes in relation to physical theory models that they are conceptual formulations of postulates which are connected by correspondence rules which are usually probabilistic in nature with the observables in various domains of evidence (1970:47). This is especially true of mental models. Keeping this in mind a few of the visual models will be briefly discussed. Downs (1970:90) provides a very simplistic model of Fishbein's attitude definition which show the fairly complex relationship



between attitudes, beliefs, and behavior (see Figure 2). He also provides a diagram showing the interaction of the individual with the spatial environment (see Figure 3). This model is one which incorporates the individual's image of the real world and how he acts upon this image and as such is trying to visualize the whole process of mental activity and behavior within the real world. Another simplistic model showing the relationship of attitudes and behavior is that of Collins (1970:141) who incorporates previous experiences, attitudes, situational factors, and behavior into a continuous feedback system of human behavior (see Figure 4). The model used by Sadler (1971:53) to explain the role of perception in the man/environment interaction also shows the place of attitudes in this interaction (see Figure 5). This model is based on the theories of cognitive behaviorism as can be seen by noting that there are three environments (the real, the perceived, and the operational environment) and that the individual behaves on the basis of the environment as he perceives it. Attitudes and beliefs therefore have a great deal to do with how a person will react in his environment.

For the purposes of this study, which is mainly concerned with opinions and attitudes, an attitude will be defined as having three components: 1) the emotive component (feelings of like and dislike), 2) the cognitive component consisting of beliefs concerned with the existence of various





Figure 2. Down's attitude and behavior model.

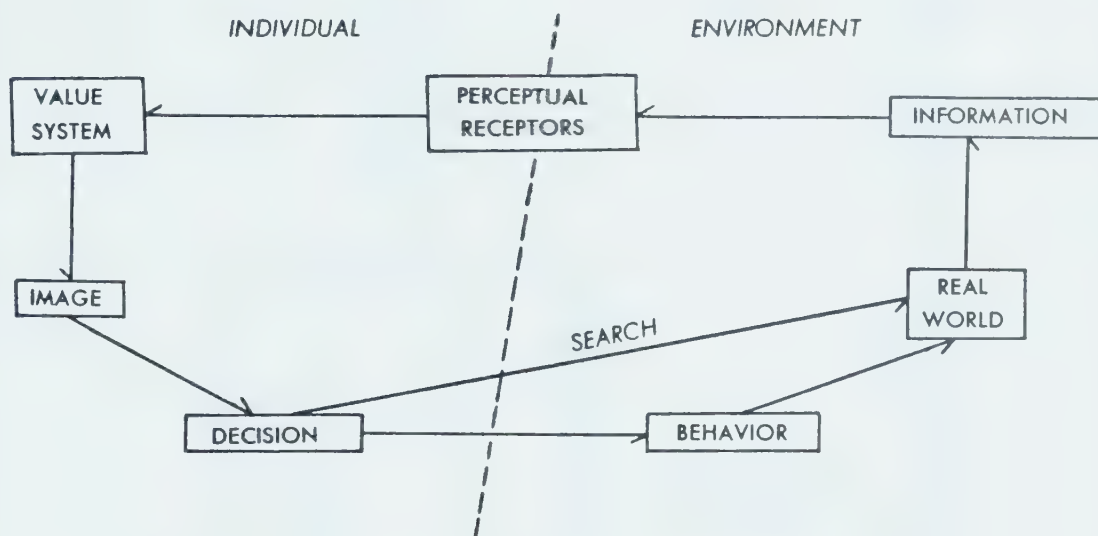


Figure 3. Down's model of the individual and spatial environment interaction.

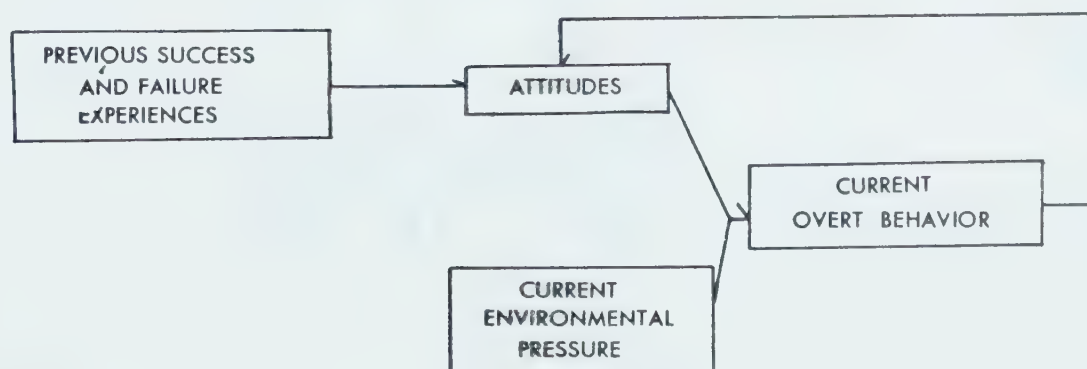


Figure 4. Collin's model of the attitude and behavior relationship.



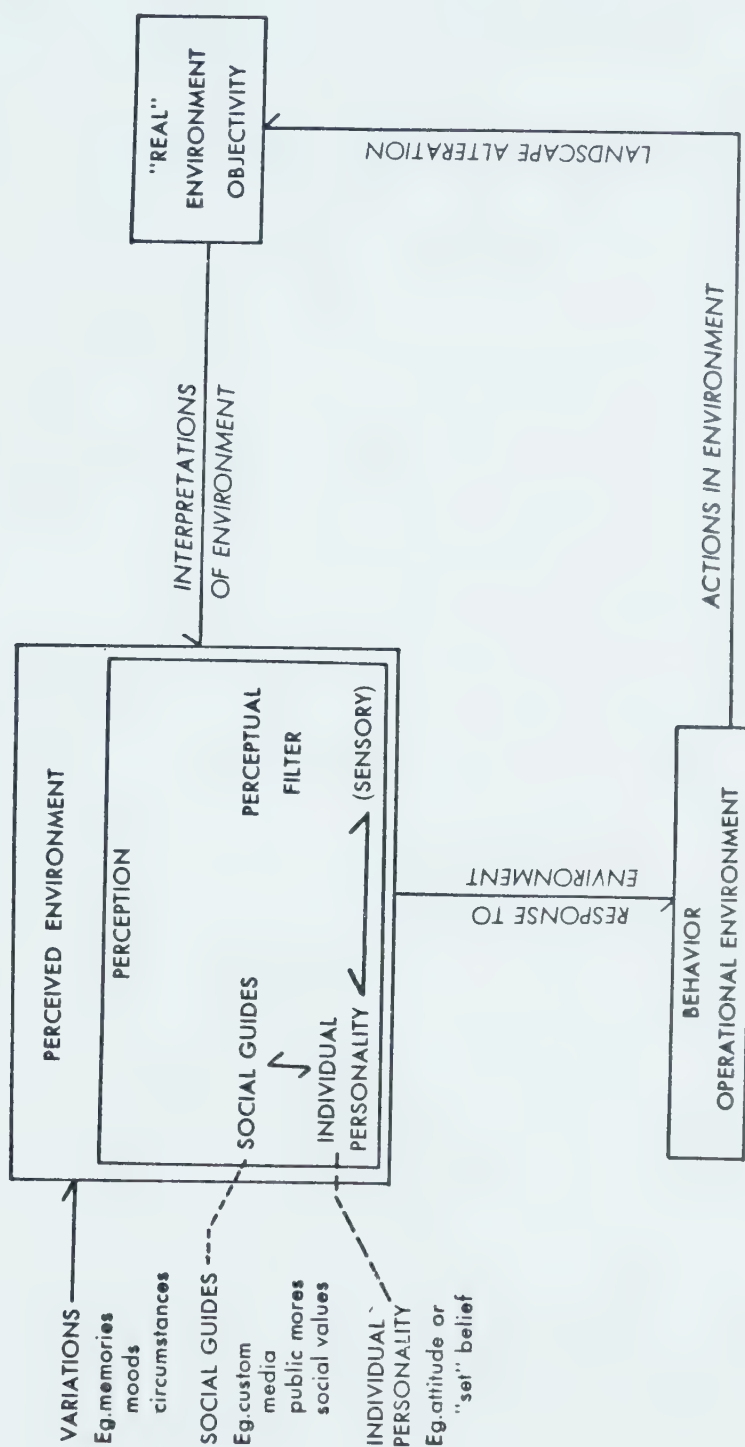


Figure 5. Sadler's model of the perceptual role in the Man/Environment relationship.





phenomena and the evaluation of them, and 3) the disposition component or the tendency to respond to various phenomena in certain ways. When the word "opinion" is used it refers to the beliefs an individual holds in the existence of and about the nature of an object, place, or person which make up the cognitive component of an attitude. Perception, a term not frequently used in this study, is defined as the process which occurs when an individual is reacting to a stimulus which is physically present and involves his impressions as modified by his past experiences, attitudes, and present mental state. These definitions make it amply clear that the terms attitude, opinions, and perception will not be used interchangeably but will refer to specific mental components and processes.

### Recreational Geography

Having defined attitudes and perceptions and having discussed the role of environmental perception studies in geography the next step is to briefly discuss environmental perception and recreation. Within geography, recreation has occupied a position similar to that of perception and attitude studies in that it too has been shared by many various disciplines. Early inventories of recreational geography indicate that great emphasis was placed on the economic aspects of recreation (McMurry, 1954; Wolfe, 1964) and it was generally considered a part of economic geography. In the mid sixties two articles emphasized the importance of



theoretical model building (Campbell, 1966) and mathematical systems based on transportation networks (Wolfe, 1967) to the understanding of spatial recreation patterns. Within recent years the importance of attitude and perception studies in determining a recreation pattern has increased. O'Riordan (1970) in his article on outdoor recreation research felt that the use of Clawson's recreational experience model could offer much in helping to determine choice in outdoor recreation. One area he stressed was the manner in which recreationists evaluate their surroundings while they are at the recreation site (O'Riordan, 1970:156). As recreational activities became more popular in the sixties it became necessary to refer to the problems of recreation. Currently research in recreation geography accentuates the need for data which the resource manager can use in planning and the need for solutions to the problems of urban recreation (Beyers, 1970). The state of recreational geography is still hazy, as Clark (1970) has noted, it is hard to tell the work done by the geographer from that done in other disciplines, and in many ways like the work done in the other disciplines it lacks scientific rigor, adequate methods, and proper study design (Clark, 1970:166). This haziness of field especially applies to attitude and perception study in recreation. By its very nature attitude and perception study is within an interdisciplinary study area. The following section therefore, will not be restricted to the work of geographers, but to the important research which has been conducted.



## Attitude and Perception Studies in Outdoor Recreation

A definition of recreation states,

Recreation consists of activities or experiences carried on within leisure, usually chosen voluntarily by the participant, either because of the satisfaction or pleasure he gains from them or because he perceives certain personal or social values to be derived from them (Kraus, 1971:266).

Implicit in this definition is the importance of satisfaction or pleasure elements in recreation as well as the perception of values derived from certain activities. Much speculation concerning these satisfactions, pleasures, and values has taken place, not a great deal of useful research has been conducted on these topics. As the use of government recreation resources increased after World War II various government agencies became interested in the different aspects of recreation use. As mentioned previously, a heavy emphasis was placed on the economic aspects of recreation and only recently has research been focused on the attitudes and perceptions of recreationists. The result of this governmental interest in recreation research has meant that much of the valuable attitude and perception study has been concentrated on certain recreational activities such as camping and wilderness use. Some studies have utilized the writings of the past to theorize about the attitudes held by recreationists today (Grazia, 1970; Nash, 1968). Noted anthropologist Margaret Mead has stated that past attitudes toward the natural environment have shaped attitudes that are held today (1962:2).



These studies are valuable, but they are of a more speculative and subjective nature than the more empirical studies which attempt to assess the values and attitudes of present day recreationists. Researchers such as Knapp (1972) have hypothesized that a person will seek in his recreational environment those attributes not available to him in his non-leisure environment, while others claim that the reverse is true--a recreationist seeks out the familiar when choosing his recreational activities (Etzkorn, 1964). Whichever the case recreational preferences do seem to be affected to some degree by culturally determined phenomena, which affect attitudes and perceptions and in turn recreational activities (Burch, 1970). One article which attempt to summarize the research on the role of perception in the recreational experience is that by Mercer (1971) who used the four phases of a recreational experience as category headings (these are the anticipation, travel, on-site, and recollection phases first used by Clawson). Mainly Mercer suggested areas for fruitful research and noted that in regard to on-site perception little is known about the relationship between stated preference and actual choice. Mercer observes that there are great problems in articulating environmental preferences and that current research techniques in recreation are often too dependent on certain types of tools such interviews and questionnaires. It appears that more questions have been asked than have been answered as far as attitudes and





perception in outdoor recreation are concerned.

As mentioned above, a great deal of attitude and perception research has been concentrated on the camper and the wilderness user. These are outdoor recreation activities which take up a large amount of recreation space in North America and are of major concern to many governmental agencies. The recreationist's conception of the resources he uses is of major concern to planners (Burch, 1964) as is better knowledge of the vocabulary (or state of knowledge) of the recreationist (Burch, 1970) and his reactions to management changes.



### CHAPTER III

#### THE CAMPER AND CARRYING CAPACITY

Prior to World War II very few people in North America camped for recreational enjoyment. The participation rates for this activity have increased tremendously in the last ten to fifteen years (Bureau of Outdoor Recreation, 1967). Camping is a recreation activity which involves numbers of governmental agencies and consumes a moderately large amount of land space and financial investment. The greatest suppliers of camping facilities in North America are governmental institutions. In Canada the federal and provincial governments are largely responsible for the available camping facilities. As previously mentioned one of the key roles of Canadian national parks is to provide opportunities for the enjoyment of nature, of which camping is considered a major aspect. Not a great deal of information is available on the Canadian camper, but such governmental programs as the Canadian Outdoor Recreation Demand Study are seeking to rectify this situation. Information concerning the complete camping event (LaPage, 1969:19) or all aspects of the camping experience is necessary before accurate demand predictions and comprehensive facility planning will be possible. For reasons mentioned earlier, camping is an activity which has received a great deal of research attention. The first part of this chapter is



concerned with an overview of the North American camper and will consist of the following three sections: 1) the socioeconomic and other characteristics of campers, 2) activity patterns of campers, and 3) camper attitudes. Following the overview a brief discussion ensues which attempts to explain the basic tenets of the theory of carrying capacity, within which various research findings will be placed. One of the aspects of carrying capacity has to do with human attitudes and perceptions and it will be here that the background will be set for the discussion of the research carried out in this study.

Before directly proceeding with the camper overview it might be well to attempt a definition of camping. Most research concerning camping does not define the activity in any precise manner. This may be because: 1) little is known about the history of camping, 2) the activity itself is fairly diverse in nature and is not a distinct entity, and 3) few prior attempts have been made to define camping. It may be considered that the term is fairly clear and needs no definition. Lucas, a pioneer in recreation research, notes that this is not the case (1964:409). For the purpose of this study the definition used by Dooling (1967) will be used. He states that camping is,

. . . .a living out-of-doors overnight using for shelter a bedroll, sleeping bag, trailer, tent, or a hut open on one or more sides, if the person takes his bedding, cooking equipment, and food with him. Formal camps, such as Boy Scout camps, are not included (Dooling, 1967:20).



It is believed that this definition will cover a broad range of camping situations. One further step has been taken in the definition of camping, and that has been to delineate three styles of camping, based on the facilities that each type of campground provides. In their 1962 recreation survey the Outdoor Recreation Resources Review Commission distinguished the developed camp area from the undeveloped (1962a:33). Since that time the camping scene has changed as greater numbers of campers are using sophisticated equipment which requires modern facilities to accommodate them. Burch and Wenger (1967) suggested three styles of family camping: easy access, remote, and combination. Three styles similar to those above which will be used in this study are: 1) the modern or developed automobile campground, 2) the undeveloped or semi-serviced automobile campground, and 3) the remote or primitive campground which is not accessible by automobile. A developed automobile campground consists of many modern facilities such as electrical, water, and sewage hookups, flush toilets, laundry rooms, permanent attendants, and often showers while an undeveloped or semi-developed automobile campground does not contain most of these amenities, but may have picnic tables, fireplaces, parking spurs, and perhaps a centrally located water source such as a well or tap. These campgrounds usually do not have permanent staff and may have money collection boxes for fees, no fees, or an automobile attendant who drives around in an automobile to collect fees from several of these campgrounds.





The remote style of camping refers to those areas which can only be reached by horse or on foot and often have no facilities for camping. These are three basic styles of camping which will be used in this study. If the above styles can be differentiated by name, can they also be differentiated by the type of camper which frequents them most often?

### Socioeconomic and other Characteristics of Campers

The majority of early research on camping was concerned with a determination of camper characteristics. It was felt that if a camper could be differentiated from the rest of the recreating public then predictions of future demand could be made and adequate facility development could take place. The first comprehensive reports on campers were a result of the studies undertaken by the Outdoor Recreation Resources Review Commission (O.R.R.R.C.). In 1959 it was estimated that one out of every six American adults participated in camping (O.R.R.R.C., 1962;:62) and an estimate made a year later reported that during the peak camping season 8% of the population went camping. However, some recent research on camping participation patterns (LaPage and Ragain 1971a; 1971b) seems to indicate that about 25% of the campers interviewed were responsible for more than 50% of all reported camping. LaPage and Ragain use the term "heavy-half" in respect to these campers. It appears that those who camp most tend to camp even more through time, while those who camp a few times per year tend to decrease their camping participation. This



research points out that some caution must be used when referring to overall numbers of adults who camp. As far as camper characteristics are concerned the O.R.R.R.C. reports (1962a;1962b) seem to indicate that campers are family groups, in the middle to upper income brackets, have a fairly high level of educational achievement, and are in the upper levels of the working class. Two other important factors concerning those who camp on a regular basis are that they have friends who camp and that they have had some experience with the outdoors at sometime in their childhood. Other research has shown that this latter factor is closely related to participation trends (LaPage and Ragain, 1971a). One cautionary note has been expressed by Shafer who notes that campers vary greatly from one type of campground to another and in the same campground from month to month (1969). He states that data from camper studies cannot be lumped together in a meaningful way. However, these above-mentioned characteristics do appear to have credibility due to the many surveys which have been conducted which show similar trends. Shafer further suggested that camper surveys should be stratified by months and similar campgrounds (1969).

An early article by Stone and Taves (1958) on users in the Boundary Waters Canoe Area (B.W.C.A.) was one of the first to point out that wilderness users differed from other campers. On a broader scale another O.R.R.R.C. study report (1962c) confirmed their findings. In their sample of 491 wilderness users they found that:



1) males predominated over females, 2) a large proportion were highly educated professionals (white collar workers) with fairly high incomes, 3) many users were from urban areas and had lived there all their lives, and 4) most wilderness users had other outdoor recreation interests and family or friends who participated in the same activities. This report also went on to note three characteristics which distinguished the inveterate user from the seldom and occasional user. These characteristics were:

- 1) introduction to camping at an early age,
- 2) greater social reinforcement of the activity by family and friends, and
- 3) males exhibited greater commitment than women.

Within the different wilderness areas studied in this report the characteristics of the user were found to vary somewhat, as did length and kind of trip, with the varying attractions of the area visited.

In a study comparing three styles (remote, developed campgrounds, and combined) of camping Burch and Wenger (1967) found that there were differences between the campers who used the various styles. When combining the three styles they found that families with two or three children were overrepresented and that the ages of the children affect which camping style they will use. From the data gathered in this study Burch (1966) hypothesized that there may be a family life cycle associated with camping style choice. He felt that biological factors such as family size would exert an influence upon the style of camping an individual would





select. Burch and Wenger did feel that old ideas concerning the individuals who camp needed to be reevaluated and that the differences in camper characteristics they found between remote and the other camping styles do not indicate that only the wealthy and the highly educated use the remote style.

One of the most well known and comprehensive studies of wilderness users is that conducted by Hendee, Catton, Marlow, and Brockman (1968) in the northwestern U.S. Similar to the O.R.R.R.C. study (1962c) this research indicated that the most intensive users were: a) very highly educated, b) had more close friends who were wilderness users, and c) were most likely to belong to conservation or outdoor clubs. From the results of the research presented above it appears that wilderness users are different from the camper in general.

Other research which deals with the socioeconomic and life style characteristics of campers is available (Wagar 1963; Etzkorn, 1964; Thorsell, 1968; Shafer, 1965; King, 1965 and 1968). Some of the Canadian national parks have very extensive material available on visitor use (e.g. Nixon, 1967a and 1967b). The mountain national parks of Canada may differ somewhat from the expected in that many campers are attracted to these parks by their reputation as scenic areas rather than as suppliers of prime campground areas. The supply of campgrounds is limited in the mountain parks and during much of the summer not a great deal of choice is afforded to the user who may have to select a campground on





the basis of time rather than preference. It is also logical that these parks would attract a much greater variety of campers from a larger area than would campgrounds in other areas with less reputation. Most studies on campers agree that socioeconomic and other characteristics do not adequately explain the camping patterns which have developed. Both Shafer (1965) and King (1968) note that socioeconomic variables are more related to why certain families camp than they are to where they camp or which style they choose. Even though socioeconomic characteristics may have an influence on camping predictions and may show the differing characteristics of attitude, groups, there are other factors which affect why people camp and where.

### Activity Patterns

There has been some indication that what people do when they camp can reveal interesting insights to their attitudes towards camping in general. This is an indirect way of assessing attitudes by both observing what people do and finding out what they prefer to do. This information also allows a comparison between activities and characteristics of the camper which might prove very helpful in increasing predictive abilities (Hendee, Gale, Catton, 1971:33) and understanding varying attitudes towards depreciative behavior. King (1966) constructed an average time budget for campers using different resource-based campgrounds in the Huron-Manistee National Forests. By looking at the following table



one notes that relaxation (camp chores, loafing, reading, and visiting) is an activity in which a very large proportion of campers engage, more than the portions of campers who participate in other activities based on the particular resources of the campground.

TABLE 2

PERCENT OF CAMPERS PARTICIPATING IN VARIOUS  
ACTIVITIES BY CAMPGROUND TYPE

| Activity                            | River and<br>stream<br>(n=530) | Lake, no<br>beach<br>(n=16) | Lake,<br>beach<br>(n=1,060) |
|-------------------------------------|--------------------------------|-----------------------------|-----------------------------|
| Relaxation                          | 91                             | 87                          | 94                          |
| Auto sightseeing                    | 40                             | 48                          | 31                          |
| Fishing                             | 26                             | 47                          | 33                          |
| Swimming                            | 18                             | 17                          | 54                          |
| Picnicking                          | 14                             | 17                          | 21                          |
| Boating                             | 0                              | 14                          | 12                          |
| Canoeing                            | (1/)                           | 0                           | 4                           |
| Hiking                              | 29                             | 17                          | 17                          |
| Gathering forest products <u>2/</u> | 18                             | 7                           | 4                           |
| Nature Study                        | 10                             | 8                           | 7                           |

1/ Less than 0.5 percent.

2/ Gathering berries, pine cones, mushrooms, flowers, etc.

Source: King, 1966

King explains that there is a relationship between types of campground preference and activity preference (1966:3).

Burch has gone beyond simple observation of actual activities to constructing a typology of activities which the camper pursues. He notes that, "Camping differs from other play in that the campers, though isolated from the commitments of everyday life, pursue many of the routines of everyday life" (1965:605). Camping as a chosen system of play has a



definitional arrangement which contains a variety of roles, experiences, and motivations. A most interesting point is that when people camp in developed site areas where they bring all their modern equipment they make simple alterations to their site by constructing objects that serve little functional value (such as a primitive wood bench between two trees when they have aluminum chairs). There is a link with the past when people gain pleasure by acting in what they consider the resourceful "pioneer" spirit. The typology of behavior established by Burch within the camping situation therefore offers interesting insights into why people act as they do. Another team of researchers, Hendee, Gale, and Gatton (1971) feel that the above approach to activity patterns is too restrictive in that it is based solely on observed activity and does not consider underlying similarities or differences in the meaning of recreational activities. Hendee, et. al. (1971) state that a typology consisting of the camper's preferred activities extends any interpretation of meaning and gives great insight into the satisfaction gained from these activities. Their study was based on a questionnaire mailed to people in the state of Washington who were asked to state their six most preferred activities from a list of twenty-six possible choices. From an analysis of the most preferred activity a table was constructed which depicted the different categories of preferred activities. This table revealed that: 1) appreciative-symbolic activities (such



as sightseeing natural features, hiking, photography, and mountain climbing) were preferred as first choice by 57.1% of the sample (of 1,208), 2) extractive-symbolic activities (fishing and hunting) were first choices for 21% of the sample, 3) passive-freeplay activities (relaxing, driving, camp chores, boating or canoeing, sunbathing, playing cards, drinking, reading, and drawing) were first preferences for 16.8% of the sample, 4) sociable learning activities (nature study, visiting with other people, nature talks, looking around camp, singing, and visiting exhibits) were first choice of 2.6% of the sample, and 5) active-expressive activities (swimming, motorcycle or scooter riding, water skiing, and participant sports) were the first choice of 2.5% of the sample. The authors note that the heavy emphasis placed on appreciative-symbolic may be due to the area in which the study was conducted. Hendee, Gale, and Catton (1971) continue on to make comparisons between age and activity and education and activity preference. From the results it appears that age has an effect on activity preference while education seems to affect the choice made earlier in life as to which activities one initially pursues. The age/education relationship as it affects activity preference is modeled in Figure 6. Hendee, et. al. (1971) explain that although the models are tentative and further research is needed to confirm them, the development of valid





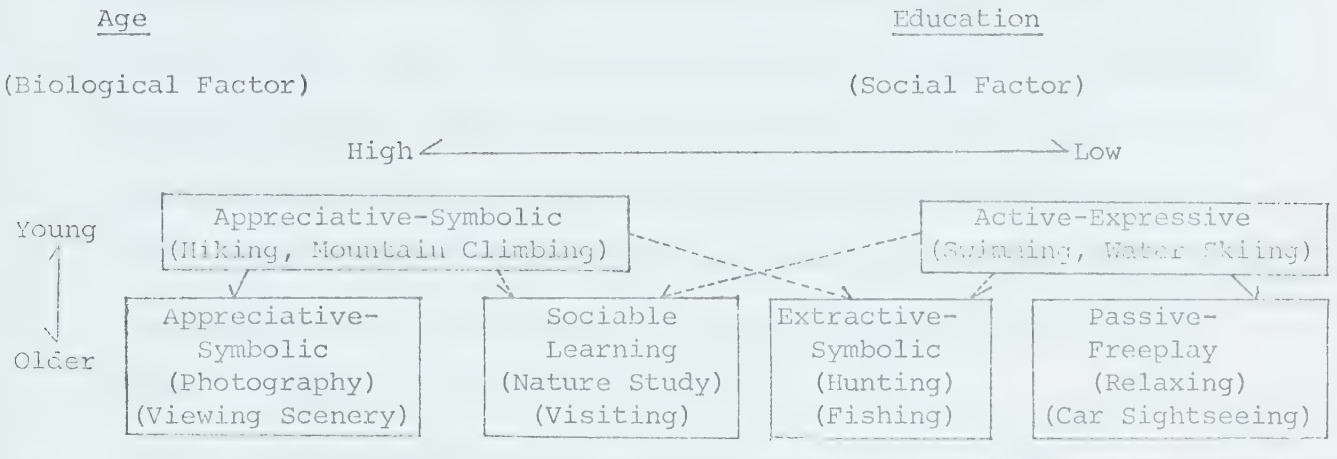


Figure 6. Recreation activity typology model

Source: Hendee, Gale, and Catton, 1971:32.

conceptual typologies may lead to the understanding of the basic underlying motivations of outdoor users. The model which Hendee, et. al. (1971) use is related to most types of outdoor recreation, but it has particular implications for camping activity because from it one could assume that certain groups of people pursue activities which may or may not be related to the natural environment (the typology and model were constructed from campers' responses to questionnaires).

By observing what people do in different camping situations it has been possible to note that a continuum develops from the highly developed campground to the remote area. Although campers are generally more involved with outdoor activities than noncampers, (O.R.R.R.C., 1962 b) the emphasis placed on the natural resource base differs between camping styles. Hendee and Campbell (1969) note that within the highly developed campground campers are less oriented to



the natural environment than they are to the social environment. They found that the activities pursued in the modern campground are both varied and nontraditional. By far the greater majority of people who camp today use these intensively developed areas which contain many modern facilities to which they bring the patterns of modern day urban social life. This "modern" camper engages in a great deal of social activity such as visiting, observing other people's equipment, organized games, and generally interacting with other people. Hendee and Campbell found that engagements in totally environment-oriented activities were rare (such as nature walks). They also note that many social problems have now become important in campground maintenance such as children freely playing in destructive or bothersome ways, theft, and general nuisance acts by other campers. A shift in clientele seems to take place as a small campground is developed to accommodate more people. The socially-oriented camper comes in larger numbers, often disturbing the previous clientele who desired greater solitude and peace of nature. These people leave the developed campground to seek out other smaller undeveloped campgrounds, or they may move further on to remote areas. It has been hypothesized that the clientele of the semi-developed campground does manifest socioeconomic characteristics and activity patterns somewhat different from the modern developed campground camper (Hendee, 1967), however, more research is needed to confirm this hypothesis. Other research (Hendee, et. al., 1968; Shafer and Meitz, 1969) has



shown that the remote camper engages in activities which are environmentally oriented and does not desire social interaction beyond the immediate close camping group. It seems clear from the above that different types of camping attract different attitude groups, as evidenced by their varying socioeconomic characteristics and activity patterns, yet is this actually the case?

### Camper Attitudes and Behavior

Mercer, in his discussion of the role of perception in the recreation experience notes that all recreation is motivated in some way (1971:263). The earlier discussion has pointed out how different groups of people are motivated to camp in certain styles. The evidence is based on both the observation of what people do and what they say in interviews and questionnaires. The detection of an attitude is a difficult task, and although the answers to questionnaires or interviews may provide useful information it must be remembered that verbalizations often do not reveal true motivations. Also an attitude as stated may not lead to the same behavior by the different people holding that attitude. However, evidence does suggest that some fairly uniform attitudes do exist among the camping population.

For campers as a whole it is fairly difficult to be certain that they hold beliefs which make them different from the total recreating public because so little research has been conducted on a broad enough scale to make accuracy possible.





Added to this is the fact that more research seems to have been conducted with the wilderness user than any other type of camper. One attempt made to estimate the overall views of the camper was that made in the O.R.R.R.C. Study Report No. 20 (1962b) where questionnaire respondents were asked if they preferred camping (roughing it) or the comfort of motels and restaurants. From this study it appears that the total camping population expresses a desire to rough it because it is a change and takes place outdoors. Some people seek solitude away from people while others seek sociability. Yet these results do not explain which groups use what facilities. It seems that people's ideas of a change or roughing it are not the same. A tentative explanation for the difference between the motivations of the wilderness camper and the developed campground user was suggested by Catton (1969). He explains that the wilderness user may be motivated by the degree of uncertainty and effort involved with fending for oneself against the vagaries of nature while the developed campground users are motivated by the sense of security and release of tension that camping offers. This latter idea seems to have some truth as campers in developed campgrounds seem very reluctant to report or pursue any violations of the law, and when they do mention any of these things it is usually in casual conversation with other campers (Clark, Hendee, and Campbell, 1971). Parents feel that they are free from watching over their children as closely as they do at home--the atmosphere of the modern developed campground is free and





easy and regarded as a relatively trouble free place for children to play. Automobile camping is one of the few social activities in which one can have contact with strangers at a minimum of risk (primarily bodily harm and theft) to oneself.

There are further indicators of the motivations and attitudes of campers. Although little research has been conducted in the developed campground there have been some rather interesting initial studies made of the "modern" campers (those who use the highly developed and serviced campgrounds) on the west coast of the United States. The recreational setting of the Pacific states is considered to be of high quality and the states of California, Oregon, and Washington have developed some highly sophisticated campground systems. One campground study conducted in 1962 in an area one hundred miles north of Los Angeles (Etzkorn, 1964) revealed that although the majority of campers indicated their reason for camping was to get away from it all, observations of their activities showed that they were similar to activities which could be pursued at home (such as visiting, playing cards, reading, playing with children, listening to the radio). Activities of an outdoor nature were pursued by a minority. In this study only a fourth used tents, the rest had shelters on wheels, which indicated that the desire to get away from regular household routines, such as dishwashing in sinks, cooking on a range, and sweeping floors was not a prime reason



for camping. An inspection of eighty-seven suggestions made for campground improvement showed that most desired more "urban like" facilities. The author of this study grouped the things which campers value into a value-syndrome, which included the following: a) rest and relaxation--getting away from social pressure, quiet, b) meeting congenial people, and c) outdoor life. The developed and serviced campground camper expresses similar reasons for camping as the wilderness camper, yet pursues these in a very different manner. The change of setting is really all that this "modern" camper requires, he brings his home setting with all its conveniences to the campground and pursues activities similar to those at home and work. Etzkorn suggests that modern campground camping is a family activity which demands little in the way of skill and can offer prestige to the middle class and lower levels of white collar workers. Although the economic motive is usually not mentioned in most of these studies it must be remembered that often the reasons given in an interview or questionnaire may not be those that totally affect the primary decision to camp. Economic reasons are not as important as they once used to be as many campers use expensive and sophisticated equipment, but the fact remains that for many lower middle income families camping is an economical way to spend a vacation and this should figure in any analysis of why people camp. The conclusion Etzkorn reached was that, "the highly routine nature of returning regularly to the same camp for



doing essentially the same things over and over resembles the world of routine work of the lower bureaucrats and many foremen" (1964:88). These conclusions of Etzkorn's are largely supported by similar research conducted in Washington by Clark, Hendee, and Campbell (1971). They note that modern campground development has expanded the appeal of camping to a more diverse population which when coupled with increased leisure time has meant a larger more varied camping population. "Modern" campers who are relatively unconcerned about a primitive experience, respond with new camping behavior norms consistent with the highly developed and crowded recreational site. Clark, et. al. found that most people were camping in developed areas because they preferred them. It is interesting to note in the following table that the distinction is made between three styles of camping when people in developed campgrounds are asked where they prefer to camp and where they actually do most of their camping.

TABLE 3

Preferred and Used Camping Styles of Developed Campground Users

| Camping Style               | Style most Preferred | Style most Used |
|-----------------------------|----------------------|-----------------|
| Developed                   | 67%                  | 71.3%           |
| Undeveloped car campgrounds | 14                   | 14.2            |
| Wilderness or backcountry   | 16                   | 9.3             |
| Other                       | 3                    | 5.2             |

Source: Clark, Hendee, and Campbell, 1971a.





Although "modern" campers using developed campgrounds were found to hold traditional views of camping (giving their children outdoor experience, enjoying solitude and tranquility, and appreciating unspoiled nature) it was evident that the means used to achieve these desirable goals are not the same as are those of the remote or semi-developed automobile campground camper. In his search for enjoyment the "modern" camper appears to turn a blind eye to manifestations of the developed campground scene that seemingly counteract traditional views of camping. Many "modern" campground users still refer to their "wilderness" experience, to them this is the wilds and they are happy.

The remote or wilderness camper is quite different from the modern camper as he is seeking environmentally oriented activities. It has already been noted that the wilderness user is generally highly educated. This, combined with his professional occupation, is believed to have some effect on his attitudes. Etzkorn explains that the creative work of professionals, engineers and business executives may provide them with the type of values they look for in recreation as well as work (1964:88). Catton (1969:125) notes that one's social position affects who one talks to and associates with. Together these will influence his expectations greatly. Most wilderness users have a fairly extensive background in camping as children and later on in life.

When wilderness users are asked why they prefer the





wilderness they usually mention features of the natural environment and the absence of people. One section of O.R.R.R.C. Study Report No. 3 (1962c) explored the appeals of wilderness and proposed five dimensions of motivation for entering the wilderness. The two strongest ones selected by users were the desire to escape the routines of daily life (exit-civilization) and a desire to enjoy the features of nature (aesthetic-religious). The O.R.R.R.C. study report (1962c) concluded that the appeals of wilderness were generic and modified only slightly by the wilderness area itself. Stone and Taves (1958) and Bultena and Taves (1961) who studied Boundary Waters Canoe Area users identified five primary images similar to those in the O.R.R.R.C. study which they interpreted as motives for wilderness use. In general most users were drawn to the B.W.C.A. by the chance to experience the beauties of nature and to escape the pressures of everyday life. Hendee, et. al. (1968) have taken most of these reasons or images and constructed an attitude scale to measure wilderness imagery. From thirty items a "wildernism" score was calculated for each person in the study (three wilderness areas in Oregon and Washington states). The factors which this scale measured, in order of their importance were: a) Spartanism - emotionally invigorating and refreshing experiences, b) Antiartifactualism - a rejection of man's permanent presence in the natural environment, c) Primevalism - the perception of the undisturbed natural environment, d) Outdoorsmanship, and e) Escapism - a desire for the natural state and aversion to modern, impersonal, human



aggregations. On this scale users were located along a continuum from urbanism in terms of their more positive affinity for natural environments devoid of human influence (Hendee, et. al., 1968:32). Most of the above studies reported similar themes of wilderness use. Hendee, et. al. (1968:35) suggest that, "Wilderness visits are motivated in large part as an escape from the artificiality of contemporary environments into natural settings, untarnished by civilization, where the necessity for primitive means of existence yields various emotional benefits to the participant." Not all wilderness users are motivated to the same degree as others. Hendee, et. al. (1968) found that the intensity of the "wilderness score" varies, and that highest scores are found in members of conservation or outdoor clubs.

In concluding this section on the assessment of the camper and his attitudes it might be said that on the whole campers do exhibit characteristics and attitudes which are peculiar to them. In general, campers are in higher education brackets, higher occupational levels, are over-represented in the middle years of life, and are largely family or close intimate friendship groups. They all seem to ascribe to the same reasons for camping (except the desire for isolation from people) and a general desire to pursue activities in the outdoors. The division of the camper into three basis styles suggests that the means used to achieve the goals of camping are not the same. A continuum of sociability to



environmentalism seems to be formed from the developed campground to the remote camp area, perhaps similar to the following model.

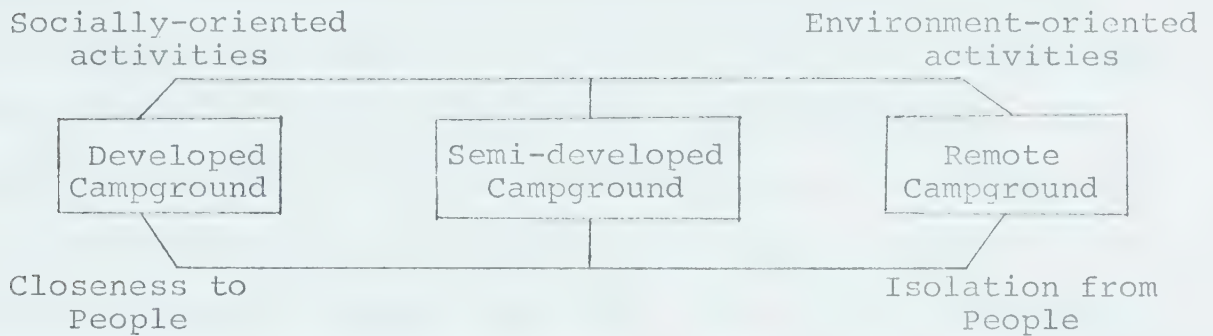


Figure 7. A continuum model of sociability to environmentalism within three types of campgrounds.

Each user group exhibits its own characteristics and attitudes concerning how their goals should be achieved. Admittedly this model does not mean that only these types of people will be found at the different sites, but there is evidence which suggests that this is the trend.

### The Camper and Carrying Capacity

The differing views of campers within and between campgrounds greatly affects the type of activities which take place and what kind of use the campground will receive. Each camper will demand a different type of quality from his camping environment and accordingly he will affect the recreational environment. The various types of quality demanded from a campground should be an essential ingredient in the planning





of these facilities because the type of campground (location, facilities, available water bodies, site spacing) does affect the distribution of visitors among campgrounds within different recreation areas be it a national park, forest, recreation area, province, or state (Lime, 1971; Lucas, 1970). Development of a campground without consideration for the quality demanded by the present or potential users can have a great influence on the type of clientele who will be attracted to the new or changed facility. Lucas feels that changes in campground size may have results on the subsequent clientele who will use the area (1970). One concept which embodies the views of the camper as well as his effects on campground quality that can be used for comprehensive planning purposes is that of carrying capacity.

Two researchers who have done a great deal to emphasize the need for carrying capacity in recreation planning are Lime (1970) and Stankey (1972). They state that,

The recreational carrying capacity is the character of use that can be supported over a specified time by an area developed at a certain level without causing excessive damage to either the physical environment or the experience for the visitor" (Lime and Stankey, 1971a:175).

Carrying capacity is not a simple concept but a multidimensional one which is comprised of three basic components: 1) management objectives, 2) recreational impact on physical resources or the natural limits, and 3) visitor attitudes or social limits. All of these components interact with each other (see Figure 1). The determination of carrying capacity





depends on the management emphasis to be placed on the relative importance of the natural and social limits, it is not a natural law. An area can take so much physical damage before it starts to deteriorate at a faster rate than it can regenerate itself - this is the natural limit. Any amount of recreation use has an effect on an area, but often the recreationist's experience is not affected by this deterioration until it reaches certain levels - this is the social limit. These two limits may not be the same and it is the interaction of these two with management objectives that determines where the carrying capacity limit will be set. Management has available various techniques at its disposal to regulate the capacity limits (Lime and Stankey, 1971a) such as: 1) alter the site (landscaping, asphalt paths, revegetation) to increase its carrying capacity, 2) regulate visitor behavior (use zoning of an area, site rotation, time spacing of user groups, reservation systems), and 3) modify visitor behavior by more subtle means that influence the user to make choices that produce the desired changes. Within this latter category fees and other eligibility requirements are included as well as communication and interpretation services. Lime and Stankey (1971a) caution against the indiscriminate use and reliance upon regulations and emphasize the benefits of communication. They feel that increased information flow can: 1) help the recreationist become more aware of the range of recreational opportunities available to him, 2)



reduce the amount of destructive behavior which takes place, 3) enable the manager to explain why certain preferences cannot be met, and 4) increase the information that the recreationist uses in making his decisions. A concept such as carrying capacity could be extremely useful in Canadian National Parks, yet the available research on the components of the concept is limited and more is required. (For more information on carrying capacity see the bibliography prepared by Lime and Stankey, 1971b).

### Management Objectives

Actually research on this topic is not quite as necessary as for the other two components. However, Lime and Stankey (1971a:182) have noted that these objectives must consider the type of recreation opportunities the area itself is going to provide and the opportunities that recreation supplies in the immediate area provide. As far as Canadian National Parks are concerned the public of Canada has the right to make the initial decisions on park purposes. The management of the Canadian National Parks are public employees and it is their obligation to have a knowledge of public values and incorporate these into management policy, but the public also needs to have adequate knowledge concerning the choices available to them. The supply of this knowledge should not be the sole responsibility of the park service because education which only centers on park management objectives will not



help to create a public well aware of all the alternatives, but it should be realized that an uninformed public can not exercise its full decision-making potential nor should the park service be expected to follow all of an uninformed public's demands.

### Recreational Impact on Physical Resources or Natural Limits

It is this aspect of recreation use which has received the most attention in the past. It has been noted on a broad scale (Jennison, 1967; Michaud, 1967) that recreational activities have ecological impact on forested areas in North America. On this same level Darling and Eichhorn (1967), Coleman (1967), and Scott-Williams (1967) have made observations of ecological damage being done in the national parks. Noake (1967) discusses the types of damage being done by campers and problems attendant with uncontrolled expansion of camping areas. Initial research into the varying factors responsible for ecological damage in campgrounds and picnic areas was done by Ripley (1962) who noted that some degree of facility manipulation (shrub barriers) was necessary to preserve the natural environment. Wagar (1964) was one of the earliest to use mechanical simulation of human effects to detect species tolerance to trampling and their rates of decline while recent research by Cieslinski and Wagar (1970) on simulated trampling made an attempt to recognize those factors which were associated with site durability. Recent studies conducted in wilderness areas



have noted in areas of heavy use, such as the Boundary Waters Canoe Area, that a great deal of site deterioration has taken place (Frissell and Duncan, 1965). Other B.W.C.A. research indicates that wilderness sites near the main travel routes were the most deteriorated, but that certain physical variables (such as the types of tree cover) can affect the type of use and deterioration that takes place (McCool, Merriam, and Cushwa, 1969). Some research conducted on campgrounds under recreational use (Echelberger, 1971; Magill, 1970; LaPage, 1967) indicates that an initial amount of deterioration takes place as less tolerant species die out, but that after this initial adjustment the rate of deterioration is much slower as more tolerant species start to grow (e.g. path rush). LaPage (1967) notes that with continued heavy use this new growth may start to rapidly deteriorate or disappear. Certain factors such as fixed picnic tables and gravel or crumbling fireplaces can greatly affect the rates of vegetation decline. Regarding the above type of studies LaPage has explained that,

These findings, along with those from similar studies on different sites, will help provide guidelines for the design and intensive management of campgrounds to improve their ability to provide a sustained supply of high quality outdoor recreation experiences (1967:11).

### Camper Attitudes or Social Limits

#### Towards the natural environment and its modification

Most research concerning this aspect of visitor attitudes has been centered on user attitudes towards facility





modifications. Very little research has dealt with the impact of trampled ground cover, or depleted shrubbery or worn trails and campsites on the visitor and his experience. This appears to be a notable lack since statements such as the one above assume that the camper is affected by natural deterioration when in actuality he may not perceive it at all. A finding such as this could have great importance for future site management. If the camper does not perceive natural deterioration then further emphasis needs to be placed on additional management communication (Wagar, 1971).

Some research has dealt with the attitudes of visitors towards certain managerial changes. Lucas (1970), Lime (1971), and Cordell and Sykes (1969) point out the various facilities which campers feel a campground should have and which factors affect their decision to camp in certain campgrounds. In a developed campground in Banff National Park, Taylor (1965) sought out visitors' reactions to the facilities provided. In respect to the use of wilderness it appears that although users generally reject the conveniences of modern civilization a large number are willing to endorse certain managerial actions, such as helicopter patrolling, in order to maintain higher quality (Hendee, et. al., 1968), even though these actions are not allowed under the Wilderness Act of 1964. This may point out the possibility of semi-wilderness areas where the quality of the natural environment may not be as high, but the experience gained by the user is the same as, or very close to,



what he may gain in a strict wilderness area.

### Towards the Behavior of Other Campers

Not a great deal is known regarding attitudes towards the social environment in an automobile campground situation. As with other recreation research there has been a bias toward the perceptions of the wilderness user. One problem which has received particular attention is that of crowding or the effect of use intensity on the recreational experience. The initial work of Lucas (1964) points out that for the wilderness user the quality of recreational experience decreases as the number of people he meets increases. Further research has pointed out that the size of the party and place of meeting have an effect on the degree of quality reduction which a wilderness user experiences (Stankey, 1972). The type of transportation which is used by the encountered party or person is an important factor as well. Lucas (1964) pointed out the friction which exists between the paddle canoeist and the users of outboard motors (a one direction friction affecting the former only) while Hendee, et. al. (1968) have noted the problems in combining the horseback rider with the hiker or both with the trail cyclist (Merriam, 1963). The problems of overuse in wilderness areas has merited some experiments in the use of trail reservation systems which may offer some solution (Schlatter, 1972).

One particular aspect of camper behavior which figures prominently in the research is that of littering. From



observation it appears that campers are unconcerned about littering (Campbell, Hendee, and Clark, 1968). Stankey (1972) has pointed out that wilderness users are rather sensitive to litter in the natural setting, but other research indicates that wilderness users from the local area are less sensitive to litter than are those from further away (McCool and Merriam, 1970). Littering behavior does not seem to be affected by anti-litter messages (Marler, 1971) or by any of the conventional methods such as litter bag handout (Clark, Hendee, and Washburne, 1972). Two outstanding studies in applied sociology (Burgess, Clark, and Hendee, 1971; Clark, Burgess, and Hendee, 1972) have pointed out the value of incentive programs (rewards for children who pick up litter) in alleviating the litter problem in larger campgrounds. From the evidence available it appears that the recreationist may be concerned about litter, but little is done about it unless some kind of management program is implemented.

Other than research on these specific topics very little is known about the effects of camper behavior on other campers. Within campgrounds managed by governmental agencies certain rules and regulations are established which protect campers from each other and from damaging the natural environment. Behavior which has the ability to either detract from another individual's recreation experience or damage the natural environment is known as depreciative behavior. Behavior of this type is important to management because often



its results are costly to repair and eventually may result in serious social problems. This type of behavior is more common than many may believe (Campbell, Hendee, and Clark, 1968). Hadley (1971) has even pointed out that new enforcement procedures are necessary in United States national parks as the rates of major crimes have increased substantially in the last few years and people no longer consider some national parks safe places to camp. Research conducted in intensively developed campgrounds in the northwestern United States has given clear indications of problems regarding depreciative behavior.

In a report on observed depreciative behavior Clark, Hendee, and Campbell (1971b) differentiate between three types of acts: 1) nuisance acts which bother or annoy other campers, 2) vandalistic acts which include deliberate destructive or defacing acts committed against private or public property or against the natural environment, and 3) legal violations which violated campground rules, traffic regulations, and local or state laws. The following table relates their findings.





TABLE 4

Northwestern United States Study  
Depreciative Acts Observed

| Depreciative Act        | Number | Percent <sup>1/2/</sup> |
|-------------------------|--------|-------------------------|
| <b>Nuisance Acts:</b>   |        |                         |
| Excessive Noise         | 12     | 5.8                     |
| Health Hazard           | 12     | 5.8                     |
| Unesthetic              | 6      | 2.9                     |
| Violations of privacy   | 12     | 5.8                     |
| Pets                    | 166    | 79.8                    |
| Total                   | 208    | 100.1<br>(49.9)         |
| <b>Vandalism:</b>       |        |                         |
| Private property        | 5      | 9.1                     |
| Campground facilities   | 34     | 61.8                    |
| Natural environment     | 16     | 29.1                    |
| Total                   | 55     | 100.0<br>(13.2)         |
| <b>Law violations:</b>  |        |                         |
| Campground rules        | 72     | 46.8                    |
| Traffic rules           | 45     | 29.2                    |
| Civil laws              | 2      | 1.3                     |
| Theft                   | 4      | 2.6                     |
| Littering               | 31     | 20.1                    |
| Total                   | 154    | 100.1<br>(36.9)         |
| Total depreciative acts | 417    | 100.0                   |

<sup>1/</sup> Numbers in parentheses are percentages of "total depreciative acts."

<sup>2/</sup> Percentages may not total 100.0 percent due to rounding.

Source: Clark, Hendee, and Campbell, 1971b:4.



Nuisance acts were the most common and constituted half of all the depreciative behavior observed which was followed by legal violations, and then vandalism. Teenagers were found to commit acts in proportion to their numbers while younger groups of children at play were responsible for most expensive damage done to facilities. Nuisance acts and rule violations were committed mainly by adults. Rule violations were committed because of ignorance of the rules or out of disregard for the rules because they interfered with other known goals. About sixty percent of the acts affected other people and in eighty percent of the acts other people were nearby. In ninety percent of these latter cases the adjacent campers showed no visible reaction. Clark notes that, "certainly such indifference creates a climate in which depreciative behavior can and will occur with little consequence to the offender" (1971:152). In only ten percent of the acts was a ranger present and when he took action the offender was usually cooperative. In the case of campground rule violations compliance with official action occurred two-thirds of the time. There was no indication that ownership of certain types of equipment was related to the frequency of depreciative acts committed.

Further research on this topic has been related to the attitudes held by campers and management toward depreciative behavior (Clark, Hendee, and Campbell, 1971a). This research found that although managers and campers ascribe to the same



goals of camping they disagree concerning which activities are appropriate to attaining those goals. They also appear to perceive depreciative behavior in a different manner. The attitudes of the developed campground camper towards which activities are acceptable have already been discussed. The resource manager often represents the views of the wilderness user in that he is more in favor of the traditional, natural environment oriented activities associated with camping. The data for this study were gathered by handing out questionnaires to the camper and having him deposit them in a collection box; the management questionnaires were mailed. The research represented three management agencies in the northwestern United States (National Park, National Forest, and State Park). Managers were asked whether they felt certain problem behavior was: 1) not now a problem, 2) becoming more of a problem, or 3) now a major problem. In general the managers viewed this behavior, ". . . . with greatest personal concern. . . ." (Clark, Hendee, and Campbell, 1971a:151), in regard to both their own views and how they felt a camper would view the same behavior. The campers' responses, however, indicated much less concern with the issues (theft, noise, littering, rule violations, vandalism, trouble in general, and improper management). Similar results were found when it was asked if campgrounds such as the one they were camping in had any of eight suggested problems (similar to those above). Most campers felt the problems were relatively unimportant



while managers felt that they were very important. The responses to these questions reflected the varying sensitivities to campground problems and the familiarity each group has had with behavior which violates the traditional behavior norms of camping. When asked what they would do if they observed various problem behaviors managers generally responded in fairly strong terms (report the activity, speak to the offender, or interfere with the actions), but felt that campers would tend to do nothing or at the most report the incident. Although the campers themselves actually expressed good intentions in these matters, observation has indicated that the norm of noninvolvement prevails in the developed campgrounds. The findings of Clark, Hendee, and Campbell do support their general thesis that, ". . . . significant differences exist in the camping orientation of users and managers in highly developed campgrounds" (1971a:156). Lucas (1970) pointed out similar findings when he found that managers and campers define recreation resource quality differently. Of the three styles of camping, it is the undeveloped automobile campground which has received the least amount of attention and assumptions that the type of camper who uses these campgrounds falls somewhere between the other two types may or may not be correct.

Within the Canadian National Parks the undeveloped automobile campground is very well represented. In many parks these campgrounds are now receiving a great deal of use, which





they are often not designed to handle. It was felt that a study which concentrated on this type of campground could be of use for park planning purposes as well as adding to the information already available on depreciative behavior within the other two styles of camping.



CHAPTER IV  
STUDY AREAS, SAMPLE, AND METHODOLOGY

Choice of Study Area

In order to carry out the objectives of study concerning depreciative behavior in undeveloped automobile campgrounds Jasper National Park on the western Alberta boundary was selected as the study area. Jasper National Park is located some 235 miles west of Edmonton, Alberta and 258 miles north-west of Calgary, Alberta. The park was created in 1907 and covers about 4,200 square miles. This park is famed for its wildlife and spectacular mountain scenery. It contains a townsite (Jasper) which has a resident population of about 3,800 and this is where the park headquarters are located. In order to present an adequate background concerning the camper in Jasper National Park and since very few camper statistics were gathered in this study the following five pages are devoted to a brief discussion of camper characteristics in Jasper National Park.

Jasper National Park has received a great visitor increase in the last ten years as the following table indicates.



TABLE 5  
JASPER NATIONAL PARK VISITOR ATTENDANCE

|          |         |         |           |
|----------|---------|---------|-----------|
| 1959-60* | 324,857 | 1966-67 | 595,164   |
| 1960-61  | 356,538 | 1967-68 | 652,186   |
| 1961-62  | 346,493 | 1968-69 | 834,748   |
| 1962-63  | 392,987 | 1969-70 | 1,135,558 |
| 1963-64  | 468,579 | 1970-71 | 1,311,333 |
| 1964-65  | 480,102 | 1971-72 | 1,502,000 |
| 1965-66  | 522,658 |         |           |

Source: National and Historic Parks Branch, 1970a.

\*years are divided at the month of March.

The number of those visitors who camp has also increased, but at a slower rate as the number of campers only doubled from 1963-64 to 1970-71 while the number of visitors tripled.

TABLE 6  
NUMBER OF CAMPER-DAYS IN JASPER NATIONAL PARK<sup>1</sup>

|         |         |         |         |
|---------|---------|---------|---------|
| 1963-64 | 193,655 | 1967-68 | 263,379 |
| 1964-65 | 187,844 | 1968-69 | 285,148 |
| 1965-66 | 197,448 | 1969-70 | 356,605 |
| 1966-67 | 212,729 | 1970-71 | 431,550 |

<sup>1</sup> A camper-day is the product of the number of campers and the number of nights they camped.

Source: National and Historic Parks Branch, 1970a.

Although the number of campers in Jasper National Park is greatest during July and August, there has been some change indicated by the 1970 and 1971 camper figures which reveal larger percentage increases in the other summer months.



TABLE 7

## MONTHLY CAMPER DISTRIBUTIONS JASPER NATIONAL PARK 1970-71

| Month     | 1971           | 1970           | Increase      | Percent change |
|-----------|----------------|----------------|---------------|----------------|
| May       | 15,306         | 13,880         | 1,426         | 10.5 +         |
| June      | 43,362         | 41,942         | 1,420         | 3.5 +          |
| July      | 213,468        | 196,208        | 17,260        | 9.0 +          |
| August    | 185,984        | 172,379        | 13,605        | 8.0 +          |
| September | 25,056         | 19,754         | 5,302         | 24.0 +         |
| October   | 1,644          | 963            | 681           | 70.0 +         |
|           | <u>484,820</u> | <u>445,126</u> | <u>39,013</u> | <u>8.0 +</u>   |

Source: Visitor Services Jasper National Park.

The 1966 visitor use survey (Nixon, 1967a) conducted in Jasper National Park showed that campers in Jasper seem to be drawn mainly from the better paid and higher status occupations. More recent statistics (1971 figures from the Jasper N.P. Visitor Services) indicate that: 1) the average party size is three people with increases to four in July and August, 2) over 75% of the campers stay only one night in any one campground, 3) over 60% of the campers use recreation vehicles of some kind, and 4) half the campers come from Alberta, a fourth from other areas of Canada, and a fourth from the United States. It is interesting to note that the type of equipment used and the residence of the camper changes as the year progresses.





TABLE 8  
TYPE OF EQUIPMENT USED BY CAMPERS  
IN JASPER NATIONAL PARK--1971

| Equipment type             | May      | June     | July     | August   | Sept.    | Oct.     |
|----------------------------|----------|----------|----------|----------|----------|----------|
| Tent                       | 37%      | 32%      | 29%      | 30%      | 29%      | 6%       |
| Tent-Trailer               | 18       | 16       | 24       | 24       | 18       | 33       |
| Trailer                    | 63% { 30 | 68% { 32 | 71% { 30 | 70% { 31 | 71% { 34 | 94% { 50 |
| Truck Camper & Motor Homes | 15       | 20       | 17       | 15       | 19       | 11       |

Source: Visitor Services Jasper National Park.

The number of recreation vehicles increased as the year progressed. A similar pattern developed with the proportion of campers from Canada and the United States.

TABLE 9  
ORIGIN OF CAMPGROUND USERS  
JASPER NATIONAL PARK--1971

| Residence area | May | June | July | August | Sept. | Oct. |
|----------------|-----|------|------|--------|-------|------|
| Canada         | 85% | 67%  | 74%  | 71%    | 64%   | 78%  |
| United States  | 15  | 33   | 26   | 29     | 36    | 22   |

Source: Visitor Services Jasper National Park.

The pattern here is not as significant as it is with the type of equipment, but the proportion of United States campers does increase from July to September. Part of this may be explained by equipment ownership patterns. Canadians use more tent-trailers and tents than residents of the United States who use proportionately more truck campers, trailers,



and motor homes than Canadians.

Jasper National Park has thirteen campgrounds, three of which are serviced or developed (flush toilets, tap water, dumping stations, resident campground attendant, electrical hookups). The other ten campgrounds are located throughout the park and are all semi-serviced or undeveloped. The primary feature of these campgrounds is that they are serviced by a mobile campground attendant who is mainly responsible for camping fee collection. Seven of these undeveloped campgrounds are located next to a main highway and can be seen from the road. For the purposes of this study three undeveloped highway campgrounds were selected.

#### Description of the Campgrounds

The three campgrounds used in this study were all undeveloped in that their facilities mainly consisted of picnic tables, fireplaces, parking spurs, and central water facilities and they were all serviced by mobile sanitation crews, wardens, and campground attendants (who were mainly responsible for fees collection) all of whom serviced other campgrounds on the same days. The campgrounds were selected on the basis of two criteria: 1) their distance from the east park gate, and 2) their size. The latter consideration was the most important since size was the major limit on the amount of research which could be adequately conducted by one person. The distance factor regulated the selection of a certain campground within a specific area as each of them



was located at varying distances from the closest metropolitan center (Edmonton) to the east park gate as shown in Figure 8. As the distance from the east gate becomes greater the proportion of Albertans in the campgrounds decreases (Nixon, 1967a). The campground (Jonas Creek) furthest from Edmonton is about the same distance from Calgary and although Calgary census division does not supply a large percentage of the campers in Jasper National Park (Nixon, 1967a) this is a factor which must be taken into account. What is of major concern here, however, is the type of visit made by local residents which are weekend stays for many Alberta residents entering from the east gate while Albertans entering from the south gate are often on vacations as the highway from Banff to the Columbia Icefields is rather rigorous for a weekend camping trip. The three campgrounds used in this study were very similar to each other so that any one factor (such as a lake) would not have a major influence on attracting certain types of campers (e.g. fishermen).

#### Rocky River Campground

This was the largest campground and the one closest to the east park gate (ten miles). It has a forty site capacity and in order to make it comparable to the other two selected campgrounds it was divided in half and twenty-two sites were used (see Figure 9). The sites are suitable for all types of camping equipment, although a stipulation is





Figure 8. Location of study campgrounds.





# ROCKY RIVER CAMPGROUND

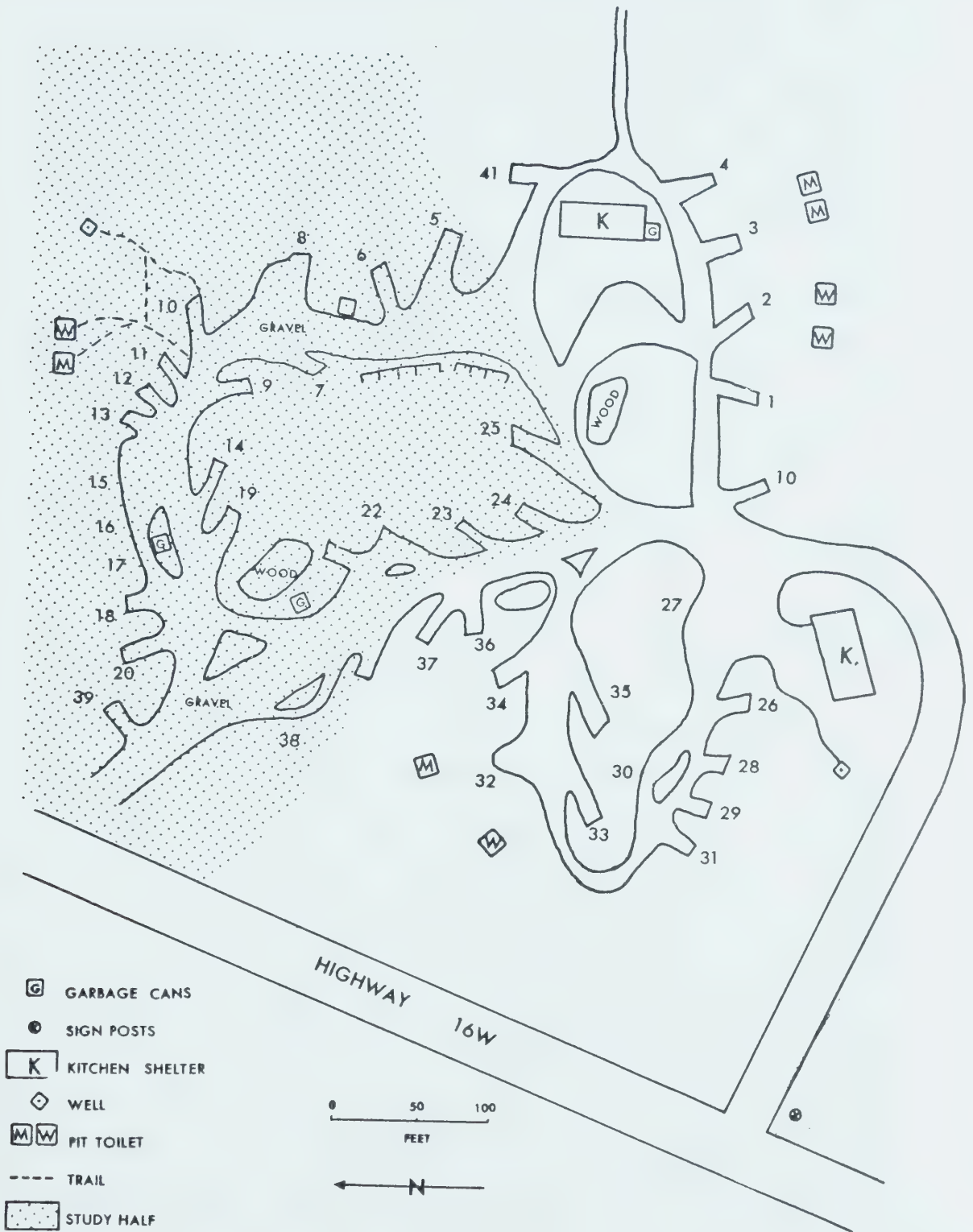


Figure 9. Rocky River Campground



placed on trailers over sixteen feet in length. The facilities consisted of tables, fireplaces, well pumps, kitchen shelters, supplied wood, and pit toilets, and a bulletin check-in board at the entrance. The camping fee here, as in the other two campgrounds under study, was \$2.00/night/party. This campground was initially constructed in the late 1930's as an army camp, but it was first opened as a public campground in 1950 about the same time as the Jasper-Edmonton Highway was hard-surfaced. The use of this campground (Figure 10) seems to fluctuate over the summer months with high peaks on holiday weekends. This may be understandable as the 1966 Jasper visitor use survey (Nixon, 1967a) indicated that 59% of those who camped on the East Highway campgrounds were drawn from Alberta. These campgrounds on the Jasper-Edmonton Highway are subject to heavy holiday weekend influxes from Albertans living near the highway, especially those from Edmonton. Rocky River was not used over its official site capacity in a consistent manner, however, some caution must be exercised when using the official figures on campgrounds which have mobile attendants as the number of parties in a campground is estimated from the sale of camping permits which may not always be an accurate measurement of the actual number of parties within the campground. The section of Rocky River used in this study consisted of an outer and an inner ring of campsites serviced by a circular gravel road. The sites in the inner ring were rather hard



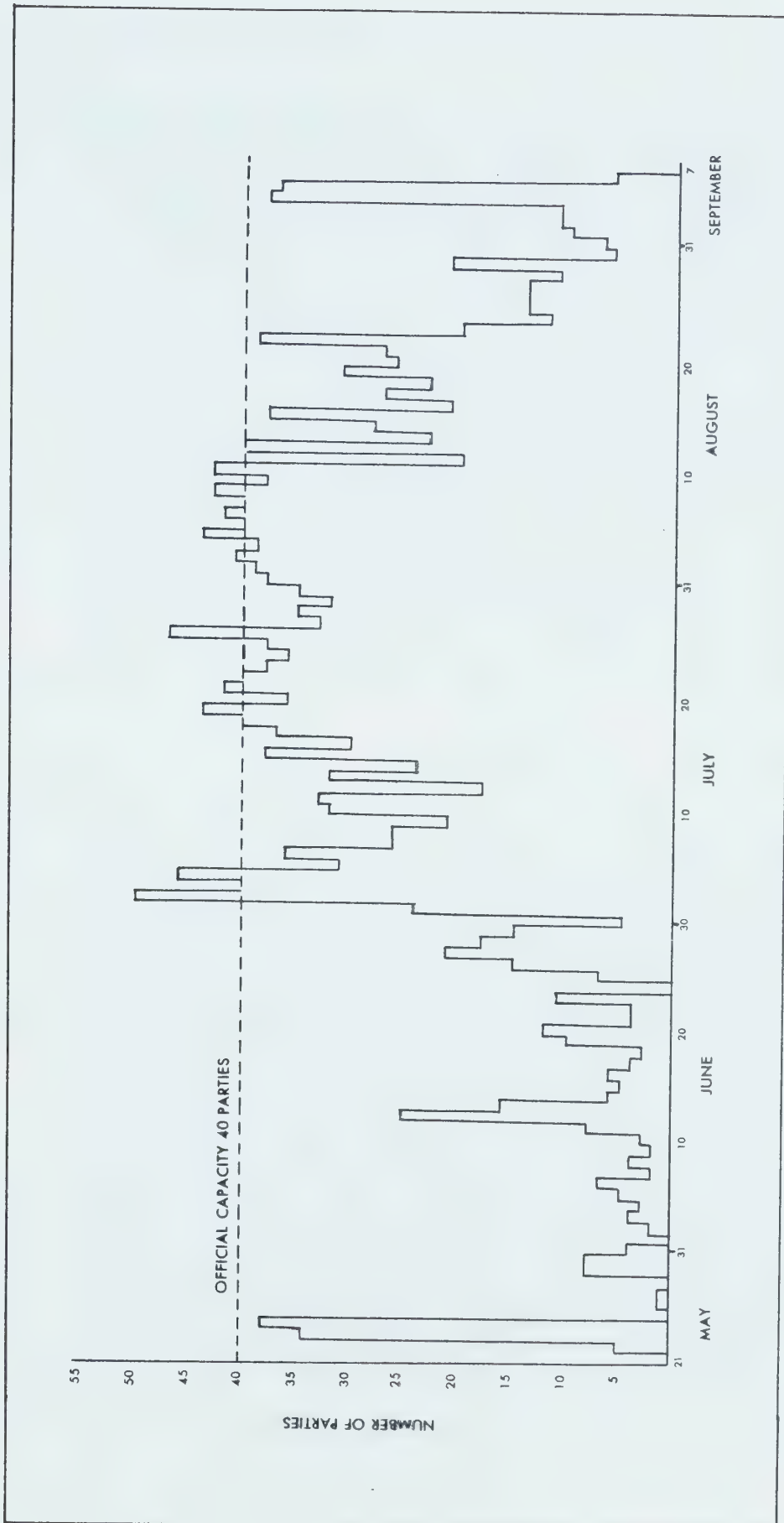


Figure 10. Number of camping parties using Rocky River during 1971.



to distinguish from each other as there was very little vegetation present (see Figure 11). Often campsites on the outer ring were no easier to distinguish as shown in Figure 12 where a camper, trailer and a tent are all using the same site which is against the official regulations. This campground was the oldest of the three selected and it maintained the least amount of undergrowth and shrub cover. Rocky River campground is usually opened in May and closes the first week of September.

#### Mount Kerkeslin Campground

This smaller campground is located south of Jasper townsite on the Jasper-Banff Highway and is fifty-four miles from the east park gate. This campground is usually open from about the beginning of June to the first week in September. It has an official capacity of eighteen sites, but a few more have been added (see Figure 13). The facilities available are similar to those of Rocky River (see Figures 14 and 15). A typical site consists of a table, a fireplace box, and a parking spur as shown in Figure 16. Mt. Kerkeslin consists of a large upper ring of sites and a smaller lower ring of sites closer to the Athabasca River. Both rings are serviced by two gravel loop roads. This campground was built in 1959 and has a considerable amount of undergrowth and grass still present. The sites, however, are not clearly distinguished especially with regards to the parking spurs. Many







Figure 11. Inner ring campsites at Rocky River



Figure 12. Multiple site occupancy at Rocky River



# MOUNT KERKESLIN CAMPGROUND



Figure 13. Mt. Kerkleslin Campground.





Figure 14. Kitchen shelter at Mt. Kerkeslin.



Figure 15. A metal swivel fireplace box mounted on concrete at Mt. Kerkeslin.





of the sites are close to each other (Figure 17) and a great deal of facility movement takes place (especially picnic tables) as each camper arranges his site. This campground receives heavy use during the months of July and August (see Figure 18) and is consistently used over its site capacity. Part of this may be attributed to its location near the townsite as many vacationers make Jasper one of their trip goals or destinations. Nixon's (1967a) report emphasized this by noting that about 60% of campers enter and leave Jasper Park by the south gate with their turnaround point being Jasper townsite and area. He further explains that campgrounds on the Jasper-Banff Highway are used by more campers from other areas of Canada and the United States than by Albertans. In 1966 about a quarter of those using these campgrounds were from Alberta (1967a:41). Although Mt. Kerkleslin has twenty sites the facility distribution was not quite enough for all sites to have a metal fireplace box on a concrete slab or a picnic table. Some sites (such as fifteen) had been created by campers and were used consistently throughout the summer until they began to be regarded as sites by campers and management. A camper created site often means vegetation damage and facility transferral.

#### Jonas Creek Campground

Jonas Creek is the furthest campground from the east gate (seventy-five miles) and although it is approximately







Figure 16. A typical campsite in the upper ring at Mt. Kerkeslin.



Figure 17. Close site spacing in the upper ring at Mt. Kerkeslin.



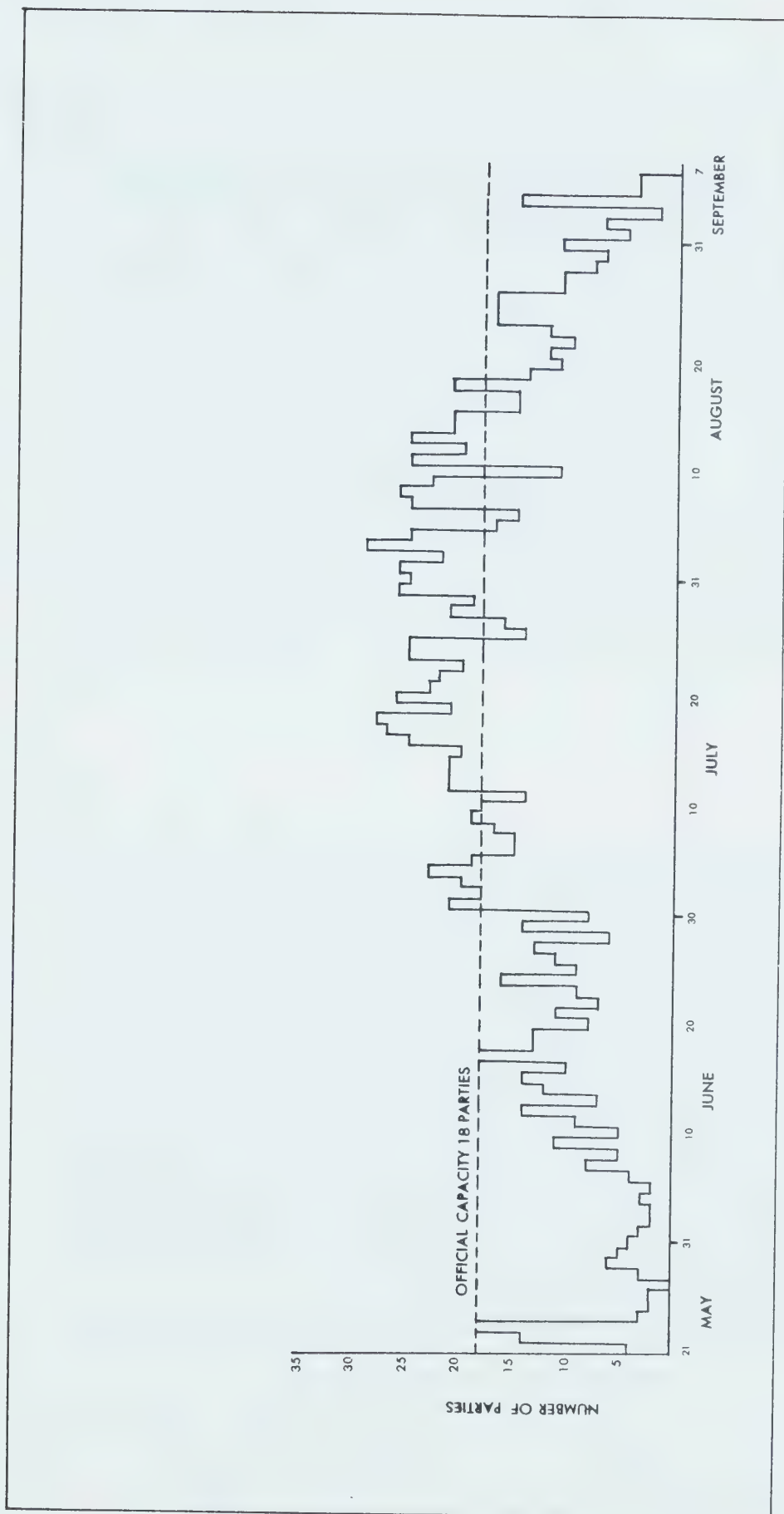


Figure 18. Number of parties using Mt. Kerkeslin during 1971.



the same size as Mr. Kerkeslin, it has features which set it apart from the other two selected campgrounds. The major difference is the use of asphalt on the main upper ring of sites (see Figures 19 and 20) and the effective use of log barriers along the parking spurs. From the campground map (Figure 21) it can be seen that the upper ring of sites is by far the larger area. The lower ring closest to Jonas Creek consists of a small gravel loop road and several sites which are not as distinct as those above them (see Figure 22). Some of these lower sites have no parking spurs and this has created some soil erosion problems as these sites also have water logged soils. The other difference at Jonas Creek is the use of pressurized tap water and waste disposal wells beneath each tap (two of these can be seen in Figure 22). Other than these two factors the campground is similar to the others. Jonas has a kitchen shelter, pit privies, supplied wood, picnic tables, fireplaces, a bulletin board, and a mobile attendant. Jonas Creek was built in 1959 and has an official capacity of 18 sites, but like Mt. Kerkeslin it has a couple more (one of which was added by the Park Service halfway through the 1972 season). The vegetation has been reduced substantially in the sites themselves, but the use of asphalt has kept cars and dust off the shrubs and plants. Since the campground is located in a rather thick forest shade it is likely that the area never has had high levels of undergrowth. Jonas Creek has a shorter camping







Figure 19. Campsites along the south edge of the upper ring at Jonas Creek.



Figure 20. Campsites in the inner part of the upper ring at Jonas Creek.





# JONAS CREEK CAMPGROUND

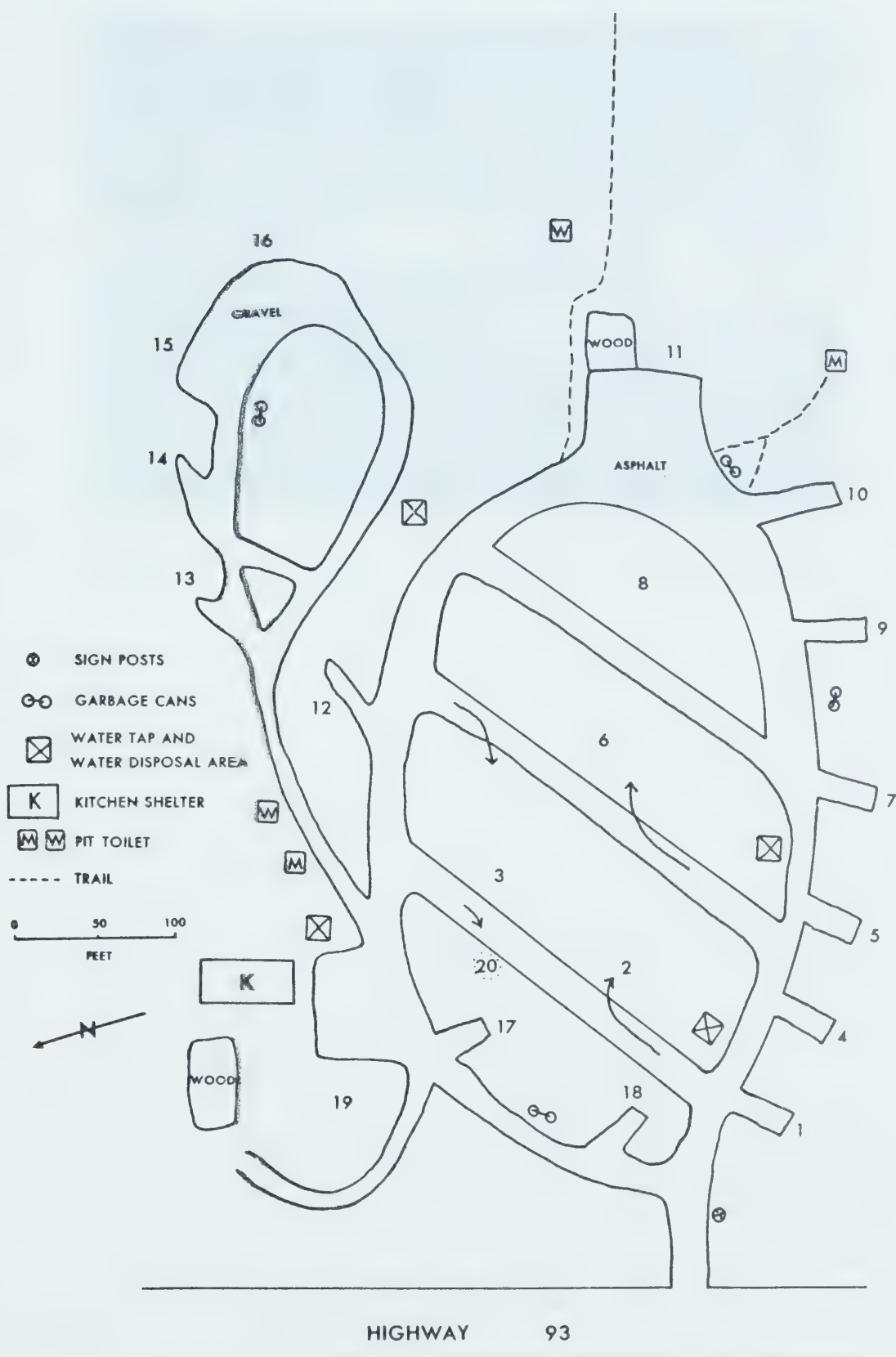


Figure 21. Jonas Creek Campground.





Figure 22. Lower ring of sites at Jonas Creek.



season than does Kerkeslin or Rocky River. It is usually opened in the middle of June and closes in the first week of September. During this season it receives rather heavy use (see Figure 23) and consistently contains more than eighteen parties in July and August. The type of use received by Jonas is similar to that of Mt. Kerkeslin and Rocky River. All three of these campgrounds exhibit a transient use pattern. As Figures 24 and 25 illustrate, in the afternoon the campground is empty or almost so and in the early evening it is full or nearly so. This pattern changes somewhat from Jonas Creek to Mt. Kerkeslin as some campers desire to stay in the townsite area for more than one night. Rocky River exhibits a radically different pattern on three or four day holiday weekends as many campers select one campground and stay there for the whole time. During the week, however, Rocky River, is as transient in nature as Mt. Kerkeslin, but is not usually as full.

#### Campground Research Schedule

Due to unforeseen circumstances such as one prior faulty campground selection which was eliminated and poor weather conditions the original spacing of research periods had to be changed from an evenly spaced schedule to a modified one. Before these problems arose the researcher was to spend ten full days in each campground for a total of thirty days with each five days being spaced apart by nine days. In



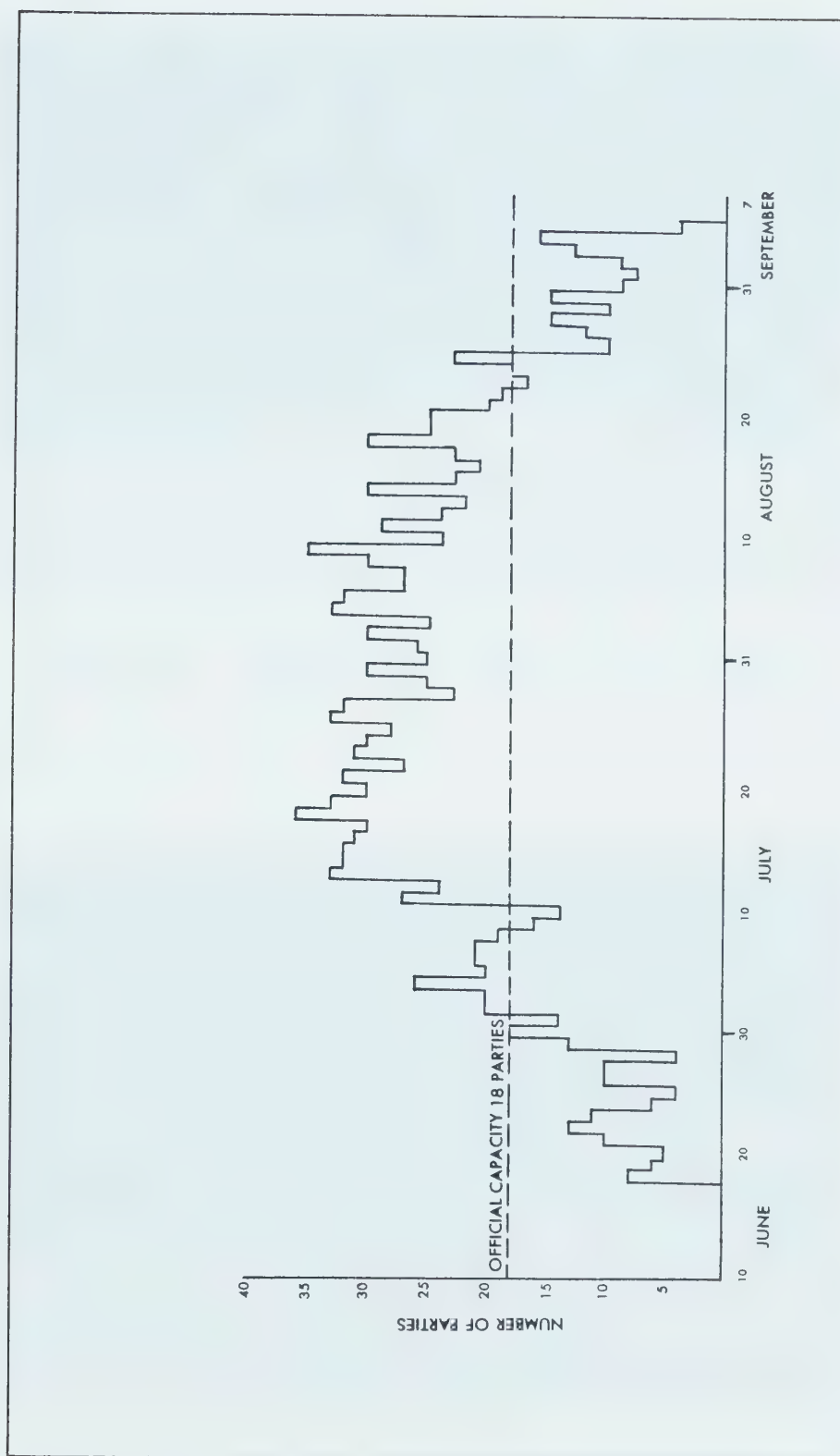


Figure 23. Number of parties using Jonas Creek during 1971.







Figure 24. Jonas Creek empty in the early afternoon.



Figure 25. Jonas Creek full in the early evening.



actuality each campground was visited twice for five days each with about five to six weeks between the first and second visits. The chronological order was as follows:

|                  |                    |                  |                       |
|------------------|--------------------|------------------|-----------------------|
| Mt. Kerkeslin--1 | June 2-6           | Mt. Kerkeslin--2 | July 15-17,<br>19, 20 |
| Rocky River--1   | June 30-<br>July 4 | Rocky River--2   | August 16-20          |
| Jonas Creek--1   | July 6-10          | Jonas Creek--2   | August 26-30          |

Within these five day periods the researcher stayed in the campground as a camper. The research techniques consisted of a personal interview with campers and observation of the behavior which took place during the five days. Because both techniques were used and the nature of campground use was transitory it was found that a strict observation/interview schedule could not be used. The time when most campers were available for interviewing was also the time when the most depreciative behavior took place (evenings and mornings). The primary emphasis was placed on obtaining five interviews a day or a total of 150 for the summer. Observation took place all the time from 8:00 a.m. in the morning to 11:00 p.m. at night. Within a small campground there are very few areas where one can observe without bringing some attention to oneself. An additional problem encountered was being able to see the behavior which did take place, as many campers in a transitory campground spend a great deal of their time in their own site and watching them unobtrusively was a difficult matter. If an observer used a strict observation



schedule in a campground such as one of those in this study the chances of him seeing an accurate picture of depreciative behavior is very slight as no particular areas are favored for any particular activities except the camper's own site. Observing campers in their sites in a closely compacted campground can be very difficult.

### Campground Observation

The basic purpose of the observation was to observe depreciative behavior as it occurred in a natural setting. Since some of the campers were interviewed some of them were aware of the researcher's presence in the campground and the main purpose of the study. Any camper who asked questions was answered truthfully. The type of observation used is referred to by Campbell (1970) as the participant as observer. He explains that, ". . . the researcher plays the role of camper but reveals his true identity to his subjects" (1970: 230). By telling the recreationist the purpose of the study and its relevance to recreational problems and assuring him that his views are important the individual can gain acceptance as a researcher. Burch (1964b) has further explained that in problem areas requiring descriptive analysis observation techniques have an important role to play. One of the greatest benefits of observation can be the opportunity to observe behavior and compare it with what people say about their own behavior. It was this desire which led to the



decision to use observation in this study.

The decision of what to observe was based on the actual rules, regulations, and laws which pertain to Canadian National Park campgrounds. All material which was available to the recreationist concerning Jasper National Park and any rules which pertained to unacceptable behavior was reviewed. As in the northwestern United States study the types of depreciative acts were divided into the following:

1) Legalistic violations were acts which violated campground rules, the criminal code, traffic laws, and liquor laws, and any other regulations mentioned in the National Parks Act;

2) Nuisance acts were those acts which were essentially a bother or annoyance to other campers and which may or may not violate actual legalistic regulations and included such things as excessive noise, health hazards, free pets, privacy violations, and unesthetic sights;

3) Vandalistic acts included any destructive act committed against private or public property and the natural environment.

Each of the above categories are not mutually exclusive in that both nuisance and vandalistic acts can be legalistic, but they are not also recorded in the legalistic category. The various types of acts were included in the category into which they best fit (see appendix i for a listing of the acts included under the three main headings). The criteria for





some of the acts came from the National Parks Act (1956, Pt. 1), Canadian National Park Service literature, and Jasper National Park campground rules.

During the first three research periods no rules or regulations were posted in the campgrounds while during the last three periods rules were posted in the campgrounds on the bulletin boards and on the pit privy doors (see appendix ii for a copy of the posted rules). The rationale for rule postings was to see if they had any effect on the number of acts observed and to detect any differences in interview responses. The rules were posted in the kitchen shelters (see Figure 28), on the pit privy doors (see Figure 29), and on the information bulletin boards (see Figure 30). The paper used was covered with two acetate sheets to protect them from the weather conditions. Also during the second research periods in each of the campgrounds a collection was made of all bottle caps, flip tabs, and bread fasteners which had accumulated during the summer up to that point to determine the effectiveness of litter act observation.

Certain exceptions to campground design were noted during the first three research periods. On the camping permits which each camper purchased it was indicated that check-out time was 11:00 a.m. the next morning after the permit was purchased. At Mt. Kerkeslin (Figure 26) and Jonas Creek (Figure 27) there were signs at the entrance stating that fires could only be permitted in the concrete and steel





Figure 26. Official signs at Jonas Creek.



Figure 27. Official signs at Mt. Kerkeslin, note the stone ring fire to the right.





Figure 28. Rules posted in kitchen shelter at Jonas Creek.



Figure 29. Rules posted on pit privy door at Jonas Creek.







Figure 30. Rules posted on bulletin board at Mt. Kerkeslin.



Figure 31. A motorhome in Rocky River.





fireplaces. At Jonas Creek (Figure 27) and Rocky River the bilingual no picnicing sign was placed at each entrance.

The basic observational unit involved recording certain characteristics of each depreciative act. These were: a) time observed, b) age or ages of the offender(s), c) sex of the offender(s), d) associated activity at the time of the act, e) reaction of any witnesses, f) apparent motivation of the offender(s), and g) any official action taken and the offender's reaction to it. Some of the observations were recorded on a small cassette tape recorder while the rest were written down on paper. The procedure usually involved the researcher walking around the campground ring road several times a day and recording what was seen back at the base site. Often this base site was selected so that it enabled a wide view of many other sites in the campground and observations could be made by taking up an advantageous position in the base site. Ultimately all the observations were transferred to a depreciative behavior report form (see appendix iii). Twice a day a scheduled observation period took place. The first was the daily inspection tour which was conducted at 10:00 a.m. and consisted of checks on: a) general litter level in the campground, b) the condition of the pit privies, and c) the state of each vacated site. Depreciative acts were also recorded during this time. At 10:00 p.m. a general evening tally of campground activity was conducted which involved a check on the general noise



level and activity range in the campground as well as depreciative act observation. Beginning at 8:00 p.m. and continuing through to 11:00 p.m. a list was kept of the campground occupancy, noting party size, type of equipment, type of group, and area of origin (by license plates). A rather loose observation schedule was used and primarily campers were observed constantly from various vantage points within the campgrounds. It was felt that this technique was justified as one of the objectives of this study was to detect the types of acts being committed and their relative proportions. The major short coming of this observation research was that most very noticeable types of depreciative behavior were observed, but those that were not so readily observed were underrepresented in the data (such as littering and small environment damage acts like broken twigs and tree carving).

#### The Camper Interview

The camper interview was primarily an attempt to assess the attitudes and opinions of campers towards depreciative behavior. The interview (appendix iv) contained some questions on why the camper liked to camp and the type of campgrounds he usually selected and those he preferred as well as some background data (e.g. party size, length of stay, residence, type of equipment, sex, and approximate age). The personal questions were kept to minimum for



reasons of brevity and because it was felt enough information of this type was available from other surveys. Before the main topic of the interview was broached the camper was asked if he would list what he thought were two or three of the most important rules a camper should follow while camping. This was asked before any of the other questions could influence his response. The first set of questions dealt with the affective component of an attitude, or the feelings of like or dislike concerning various activities which may or may not bother the camper if he saw them. The next set of items dealt with the knowledge of the camper concerning illegal campground activities (cognitive component) and consisted of showing the camper a series of six pictures (see appendix vi) and asking him if he thought any Canadian National Park rules, regulations, or laws were being broken in the pictures. Another set of items which tested the cognitive component were included which dealt primarily with evaluative beliefs. The camper was asked whether he thought the activities were right or wrong (on a five point continuum from always right to always wrong). The last set of items was concerned with the action component of attitude and asked what actions the camper thought he would take in certain hypothesized situations which might take place in a campground. The remaining questions in the interview tried to elicit any feelings of concern that the camper may have had towards behavior problems by asking some "yes" or "no"





questions and probing for further clarification if a certain response was given. Two of the questions dealt specifically with what type of an attendant the camper preferred and what he felt his responsibility was in helping to control the behavior of other campers.

When attempting to solicit an interview the camper was approached casually when he was not involved with either unpacking or packing up his equipment. Also, people with recreation vehicles were not approached if they were inside their vehicle. The researcher gave the camper her name, the institution under which the study was being conducted, and the purpose of the study. He was assured that the information he gave would be confidential and anonymous. An article by LaPage (1969b) indicated that campers generally respond quite favorably to interviews and this proved to be the case. Of the 150 campers approached for an interview, all of them consented and many expressed interest in the results of the study. Only campers above eighteen years of age were asked to grant an interview because the situations used in the questions mainly dealt with adult reactions, but it may be that children's reactions could offer interesting insights into certain types of depreciative behavior. The method of interview selection was again not a matter of rigid control, since most campers were busy during much of the time they were present in the campground. During each research period of five days, twenty-five interviews were gathered or five





per day. Campers were selected on the basis of their sites (an attempt was made to gather an interview from each site in the campground during the five days) and whether or not the individual was engaged in work chores (such as fixing or eating a meal and setting up or taking down equipment). Once the site was determined either a male or female was asked to grant an interview (the interviews varied one male then one female until twenty-five were collected). At times interviewed campers had to be selected when and wherever possible as at times the weather was poor and few people were available outside and often there were very few parties in the campground especially at the beginning of June and the end of August.

### Management Questionnaire

The management questionnaire was designed primarily to test the reactions of management to the same questions asked of the camper. This involved asking management personnel what their answers were and how they thought the average undeveloped automobile campground camper would respond. The questionnaire and the introductory letter are contained in appendix v. Other questions which were not asked in the camper interview had to do with the background of the specific manager such as: a) job characteristics, b) years worked for the National Park Service and in Jasper National Park, and c) what they believed to be the main



purpose of the Canadian National Parks. The managers were asked through which gate they thought most Albertans entered Jasper and if they thought Albertans favored any specific campgrounds. Two last questions dealt with camper familiarity with rules and regulations and the problems of overcrowding. The management sample was not large as the population itself was small (forty-four) and the questionnaire form was rather long and fairly involved. The questionnaire was sent to all the wardens, campground attendants (mobile only), and to some administration personnel and park naturalists. The questionnaires were distributed in Jasper on August the fifteenth and two call back letters (appendix viii) were sent. The first call back was sent on October the tenth and the second on November the twenty-first. The response return was 48% of the total population or twenty-one questionnaires.

### Observation, Interview, and Questionnaire Analysis

Since the camper and management surveys did not involve large numbers and since the observation data were mainly normative the information was analyzed in a fairly simple manner. The question responses and observations were coded and then placed on computer cards. Most of the data was of a normative nature (not involving real numbers) and therefore very few statistical tests were used. Also time and the large amount of final coded information kept the data



manipulation to a minimum. Some items were cross tabulated and the chi-square test was used to indicate a significant relationship. Any chi-square indicating a greater than 10% chance that the two items were not related to each other (or that the null hypothesis was accepted) was rejected. The reason for such a high acceptance level was because although in many cases the cross tabulation tables had many empty cells affecting the chi-square value, this study was seeking to establish broad trends and the objective here was not to solidly prove or disprove specific hypotheses. Only those relationships which were clear are presented in the data discussion. For most questions and observation explanations the data were arranged in a tabular or frequency form. Three of the questions involving a series of items were amenable to computations which gave a total "score" for all the items. In essence this study is of an exploratory nature and did not involve rigid controls or complicated statistical testing.



## CHAPTER V

### DEPRECIATIVE BEHAVIOR AS OBSERVED

Within each campground it was found that a certain amount of depreciative behavior does take place. Whether or not the amount could be considered extensive, moderate, or small is not known since there is so little information available for comparison purposes. In total 621 depreciative acts were observed. This does not mean that only 621 persons were involved as an act constituted a single activity observation which could involve more than one person. In order to compare the characteristics of all the campers present in the campgrounds and those found to engage in depreciative behavior the first part of this chapter is devoted to a discussion of the general characteristics of the campers during each of the study periods. The second part of the chapter will deal specifically with the depreciative acts which were observed, while the last section contains a summarization of the results of the observation research.

#### The Camper in General

As may be expected each of the campgrounds exhibited different user patterns, but some of the differences indicated changes over the camping season rather than static differences between the three campgrounds. This information





was gained from the daily census of campground occupancy when various statistics were gathered on all the campers present in the campgrounds during the thirty research days. Much of the data gathered during the first research period in each of the three campgrounds were not the same as that gathered from the second research periods. The number of parties present in each campground during each five day research period was as follows:

TABLE 10  
NUMBER OF PARTIES IN EACH CAMPGROUND  
DURING RESEARCH PERIODS

|                             | <u>Party<br/>Numbers</u> | <u>Total<br/>Percentage</u> |
|-----------------------------|--------------------------|-----------------------------|
| Mount Kerkeslin first trip  | 54                       | 8.1                         |
| Rocky River first trip      | 114                      | 17.2                        |
| Jonas Creek first trip      | 117                      | 17.6                        |
| Mount Kerkeslin second trip | 159                      | 24.0                        |
| Rocky River second trip     | 115                      | 17.3                        |
| Jonas Creek second trip     | 105                      | 15.8                        |
|                             | <hr/>                    | <hr/>                       |
|                             | 664                      | 100.0                       |

The changes in user type over time were in part indicated by the varying proportions of the small and large party groups. During the heavy camping season the family with two or more children predominated while during the early (Mt. Kerkeslin first trip) and late summer (Jonas Creek second trip) the proportion of smaller parties increased (see Table 11). Overall, however, parties of one and two accounted for nearly



TABLE 11

PERCENTAGE OF CAMPER GROUPS OF DIFFERENT SIZES  
DURING OBSERVATION PERIOD

| Number in<br>Party | Whole | K-1* | R-1  | J-1  | K-2  | R-2  | J-2  |
|--------------------|-------|------|------|------|------|------|------|
| 1                  | 2.4   | 5.6  | 1.8  | .9   | 2.5  | 2.6  | 2.9  |
| 2                  | 42.9  | 64.8 | 21.9 | 41.0 | 47.8 | 40.9 | 51.4 |
| 3                  | 14.3  | 16.7 | 13.2 | 16.2 | 17.6 | 8.7  | 13.3 |
| 4                  | 24.2  | 7.4  | 38.6 | 21.4 | 18.9 | 29.6 | 22.9 |
| 5                  | 10.8  | 3.7  | 13.2 | 13.7 | 11.3 | 13.0 | 5.7  |
| 6                  | 3.0   | .0   | 7.9  | 5.1  | 11.9 | .9   | 1.0  |
| 7                  | 1.2   | .0   | .9   | .9   | .0   | 4.3  | 1.0  |
| 8                  | .9    | 1.9  | 1.8  | .9   | .0   | .0   | 1.9  |
| 10                 | .2    | .0   | .9   | .0   | .0   | .0   | .0   |

\*From this point on the campgrounds will be indicated by their initials followed by the trip number, in this case Mount Kerkeslin first trip.

half of all the parties recorded during the thirty observation days. Mt. Kerkeslin and Jonas Creek both were more frequented by smaller parties than was Rocky River. In all three campgrounds the family group (with or without children) predominated with 80% of all camping groups falling into this category.

The type of equipment used by camping parties shown in Table 12 clearly differentiated the three campgrounds from each other. Mt. Kerkeslin campers used more tents than other types of equipment while camper trucks were the second most popular type. The tent was very popular on the first trip to Rocky River (a holiday weekend), but during both trips the use of trailers and truck campers was fairly high. The



TABLE 12  
TYPE OF EQUIPMENT USED BY CAMPERS

| Type of<br>Equipment   | <u>K-1</u>             | <u>K-2</u>            | <u>R-1</u>            | <u>R-2</u>            | <u>J-1</u>            | <u>J-2</u>             |
|------------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|
| Car or outside<br>Tent | 1 ( 1.9)*<br>26 (48.1) | 6 ( 3.8)<br>51 (32.1) | 3 ( 2.6)<br>40 (35.1) | 2 ( 1.7)<br>29 (25.2) | 1 ( 0.9)<br>29 (24.8) | 11 (10.5)<br>24 (22.9) |
| Tent-Trailer           | 4 ( 7.4)               | 31 (19.5)             | 26 (22.8)             | 26 (22.6)             | 18 (15.4)             | 4 ( 3.8)               |
| Van                    | 6 (11.1)               | 13 ( 8.2)             | 7 ( 6.1)              | 6 ( 5.2)              | 7 ( 6.0)              | 15 (14.3)              |
| Trailer                | 2 ( 3.7)               | 15 ( 9.4)             | 24 (21.1)             | 24 (20.9)             | 20 (17.1)             | 13 (12.4)              |
| Camper                 | 13 (24.1)              | 33 (20.8)             | 13 (11.4)             | 19 (16.5)             | 36 (30.8)             | 27 (25.7)              |
| Motor Home             | 1 ( 1.9)               | 6 ( 3.8)              | 0                     | 7 ( 6.1)              | 3 ( 2.6)              | 7 ( 6.7)               |
| Bicycle and Tent       | 0                      | 1 ( 0.6)              | 0                     | 0                     | 2 ( 1.7)              | 3 ( 2.9)               |
| Motorcycle and Tent    | 1 ( 1.9)               | 3 ( 1.9)              | 1 ( 0.9)              | 2 ( 1.7)              | 1 ( 0.9)              | 1 ( 1.0)               |

\*Figures in parentheses are percentages by each column.



tent-trailer received its greatest proportion of users at Rocky River. Jonas Creek had the highest proportion of campers using trailers and truck campers. Overall 30% of all the campers used the tent, 16% used a tent-trailer, and about 40% used some type of wheeled recreation vehicle.

An even clearer indication of different use patterns between the three campgrounds was the campers' residence. From the figures shown in Table 13 it should be apparent that within the campground closest to the east park gate (Rocky River) more campers were drawn from Alberta and that within the campgrounds further from the east gate more campers from other parts of Canada and the United States were present. A large number of the campers in Jasper National Park who enter from the south gate make a turnaround at Jasper townsite and go back down the Jasper-Banff highway. It seems obvious that the proportion of local Albertans would decrease while the proportion of eastern Canadians and United States residents would increase within the campgrounds south of Jasper townsite and this does appear to be the case. Very few United States residents stayed at Rocky River, but about one-fourth of the campers in Jonas Creek came from Alberta which would seem to indicate that a number of local residents do use the park for more than weekend visits. Since the precise location of the campers was not ascertained it can only be assumed that a number of the Albertans who stayed in Jonas Creek were from southern Alberta and had entered the park from the south.





TABLE 13

## CAMPERS' RESIDENCE

| <u>Residence Area</u>  | <u>K-1</u> | <u>K-2</u> | <u>R-1</u> | <u>R-2</u> | <u>J-1</u> | <u>J-2</u> |
|------------------------|------------|------------|------------|------------|------------|------------|
| Alberta                | 14 (25.9)  | 26 (16.4)  | 76 (66.7)  | 69 (60.0)  | 35 (29.9)  | 22 (21.0)  |
| British Columbia       | 10 (18.5)  | 11 ( 6.9)  | 14 (12.3)  | 10 ( 8.7)  | 6 ( 5.1)   | 7 ( 6.7)   |
| Prairie Canada         | 3 ( 5.6)   | 13 ( 8.2)  | 7 ( 6.1)   | 12 (10.4)  | 6 ( 5.1)   | 2 ( 6.7)   |
| Eastern Canada         | 5 ( 9.3)   | 34 (21.4)  | 6 ( 5.3)   | 6 ( 5.2)   | 8 ( 6.8)   | 8 ( 7.6)   |
| Northern Canada        | 0          | 0          | 1 ( 0.9)   | 1 ( 0.9)   | 0          | 1 ( 1.0)   |
| Western United States* | 18 (33.3)  | 40 (25.2)  | 4 ( 3.5)   | 13 (11.3)  | 44 (37.6)  | 48 (45.7)  |
| Eastern United States  | 4 ( 7.4)   | 35 (22.2)  | 6 ( 5.3)   | 3 ( 2.6)   | 18 (15.4)  | 15 (14.3)  |
| Foreign                | 0          | 0          | 0          | 1 ( 0.9)   | 0          | 2 ( 1.9)   |

\*The division between the western and eastern United States follows the Mississippi River.



Various other factors were involved with both of the above characteristics. The type of equipment used did vary according to party size as smaller parties (two and three people) had a preference for tents and truck campers while tent-trailers were favored by the larger groups (four and five people). The van was popular with couples while the trailer was popular with couples and families of four. The strength of this relationship was not the same for all six observation periods so some caution must be taken with these figures as a factor not included in the analysis was that of age, which does seem to have some affect on a camper's equipment choice. A relationship found in this study and the 1966 Jasper visitor user survey (Nixon, 1967a) was that between party size and residence area. As the distance increased the party size tended to be smaller. The real anomaly here, however, were the Canadian prairie provinces (Saskatchewan and Manitoba) which had a greater proportion of large parties in relation to their distance. United States parties were mainly small (one to four people) as were parties from

TABLE 14

## PERCENTAGE OF THE PARTIES OVER THREE IN SIZE

| <u>Alberta</u>      | <u>British Columbia</u> | <u>Prairie</u> | <u>Eastern Canada</u> |
|---------------------|-------------------------|----------------|-----------------------|
| 46.6%               | 32.7%                   | 55.9%          | 37.3%                 |
| <u>Western U.S.</u> | <u>Eastern U.S.</u>     | <u>Foreign</u> |                       |
| 28.8%               | 21%                     | 25.0%          |                       |



British Columbia. The figure for foreign campers must be used carefully as there were only three foreign parties recorded.<sup>1</sup> It seems logical that the expenses and problems of taking a large party camping would increase with distance which might explain why larger parties tend to come from smaller distances from the park.

The relationship between residence and the type of equipment used is not totally clear, however, as noted by Nixon (1967a) Albertans favor tents and tent-trailers, as 57.4% of the Albertans recorded in this study used these types of equipment (see Table 15). Nearly half of those from British Columbia used tents or truck campers while 65% of those from the Canadian prairie provinces used the tent and tent-trailer. Of those from eastern Canada (Ontario, Quebec, and the Maritime provinces) 71.1% used tents or tent-trailers. Over half of the campers from the western United States favored the truck camper, trailer, or motor homes with the truck camper being used by one-third of them. Half of the eastern United States residents used a tent or a truck camper with another 21% of them using a van. In general the higher per capita incomes of many United States residents was indicated by the fairly large proportions of them using more sophisticated recreation vehicles such as motor homes,

---

<sup>1</sup>This figure was later found to be in error as more than three foreign residents were interviewed. This error was due to the difficulty in trying to identify the foreign resident who often had automobiles with North American license plates.



TABLE 15  
CAMPER RESIDENCE BY TYPE OF EQUIPMENT USED

| <u>Residence</u> | <u>Car</u> | <u>Tent</u> | <u>Tent<br/>Trailer</u> | <u>Van</u> | <u>Trailer</u> | <u>Truck<br/>Camper</u> | <u>Motor<br/>Home</u> | <u>Bicycle<br/>and<br/>Tent</u> | <u>Motor<br/>Bicycle<br/>and<br/>Tent</u> |
|------------------|------------|-------------|-------------------------|------------|----------------|-------------------------|-----------------------|---------------------------------|-------------------------------------------|
| Alberta          | 3 ( 1.2)*  | 86 (35.5)   | 53 (21.9)               | 7 ( 2.9)   | 49 (20.2)      | 39 (16.1)               | 2 ( 0.8)              | 2 ( 0.8)                        | 1 ( 0.4)                                  |
| British Columbia | 3 ( 5.2)   | 16 (27.6)   | 7 (12.1)                | 11 (19.0)  | 6 (10.3)       | 13 (22.4)               | 1 ( 1.7)              | 0                               | 1 ( 1.7)                                  |
| Prairie          | 1 ( 2.3)   | 11 (25.6)   | 17 (39.5)               | 0          | 9 (20.9)       | 4 ( 9.3)                | 0                     | 1 ( 2.3)                        | 0                                         |
| Eastern          |            |             |                         |            |                |                         |                       |                                 |                                           |
| Canada           | 4 ( 6.0)   | 31 (46.3)   | 17 (25.4)               | 2 ( 3.0)   | 2 ( 3.0)       | 8 (11.9)                | 1 ( 1.5)              | 0                               | 2 ( 3.0)                                  |
| Northern         |            |             |                         |            |                |                         |                       |                                 |                                           |
| Canada           | 0          | 1 (33.3)    | 0                       | 0          | 1 (33.3)       | 1 (33.3)                | 0                     | 0                               | 0                                         |
| Western U.S.     | 9 ( 5.4)   | 32 (19.2)   | 11 (16.6)               | 17 (10.2)  | 23 (13.8)      | 55 (32.9)               | 14 ( 8.4)             | 2 ( 1.2)                        | 4 ( 2.4)                                  |
| Eastern U.S.     | 4 ( 4.9)   | 21 (25.9)   | 4 ( 4.9)                | 17 (21.0)  | 8 ( 9.9)       | 21 (25.9)               | 4 ( 4.9)              | 1 ( 1.2)                        | 1 ( 1.2)                                  |
| Foreign          | 0          | 1 (33.3)    | 0                       | 0          | 0              | 0                       | 2 (66.7)              | 0                               | 0                                         |

\*Figures in parentheses are percentages by each row.





truck campers, and outfitted camper vans. Fairly high proportions of Canadian campers were using tents and tent-trailers, although the trailer seems more popular with Canadians than United States residents.

The undeveloped highway campgrounds surveyed did not show clear indications of a specific type of clientele, but seem to have representatives of both remote and developed camping styles. The type of equipment ranged from bicycles and small tents to large self contained motor homes (Figure 31, page 112). The only fact which clearly differentiated the three campgrounds from each other was that the proportion of Albertans was greatest in Rocky River, while the proportion of United States residents was greatest in Jonas Creek.

#### Depreciative Behavior Situations

It has already been noted that each depreciative act observed was a situation where one type of an activity was taking place which could involve any number of individuals. During the thirty days of observation 621 acts were recorded. Over half of the acts observed were legalistic and a majority of these consisted of campground rule violations. No criminal code violations or liquor law violations were observed (see Table 16). Jonas Creek had the highest proportion of legalistic acts observed while Mt. Kerkeslin had the lowest. Nuisance acts were not as prevalent as in the northwestern United States study in developed campgrounds where half the



TABLE 16

## FREQUENCY OF SITUATIONAL DEPRECIATIVE ACTS OBSERVED

| <u>Type of Act</u>  | <u>Total</u> | <u>Mount<br/>Kerkeslin</u> | <u>Rocky<br/>River</u> | <u>Jonas<br/>Creek</u> |
|---------------------|--------------|----------------------------|------------------------|------------------------|
| Legalistic          |              |                            |                        |                        |
| Traffic Violations  | 1 ( 0.2)     |                            |                        | 1 ( 0.4)               |
| Campground Rules    | 342 (52.2)   | 82 (47.1)                  | 92 (46.0)              | 150 (60.7)             |
| Littering           | 44 ( 7.1)    | 10 ( 5.7)                  | 19 ( 9.5)              | 15 ( 6.1)              |
| Total               | 387 (59.5)   | 92 (62.8)                  | 111 (55.5)             | 105 (67.2)             |
| Nuisance            |              |                            |                        |                        |
| Pet Violations      | 69 (11.1)    | 22 (12.6)                  | 16 ( 8.0)              | 31 (12.6)              |
| Noise               | 12 ( 1.9)    | 2 ( 1.1)                   | 4 ( 2.0)               | 6 ( 2.4)               |
| Health Hazards      | 25 ( 4.0)    | 14 ( 8.0)                  | 7 ( 3.5)               | 4 ( 1.6)               |
| Privacy Violations  | 14 ( 2.3)    | 1 ( 0.6)                   | 9 ( 4.5)               | 4 ( 1.6)               |
| Aesthetic           | 4 ( 0.6)     |                            |                        | 4 ( 1.6)               |
| Total               | 124 (19.9)   | 39 (22.3)                  | 36 (18.0)              | 49 (19.8)              |
| Vandalistic         |              |                            |                        |                        |
| Park Property       | 6 ( 1.0)     |                            | 3 ( 1.5)               | 3 ( 1.2)               |
| Natural Environment | 100 (16.1)   | 39 (22.4)                  | 41 (20.5)              | 20 ( 8.1)              |
| Private Property    | 1 ( 0.2)     |                            |                        | 1 ( 0.4)               |
| Total               | 107 (17.3)   | 39 (22.4)                  | 44 (22.0)              | 24 ( 9.7)              |
| Camper Etiquette    |              |                            |                        |                        |
| Taking Chopped Wood | 15 ( 2.4)    | 3 ( 1.7)                   | 8 ( 4.0)               | 4 ( 1.6)               |
| Bright Lights       | 3 ( 0.5)     | 1 ( 0.6)                   |                        | 2 ( 0.8)               |
| Improper parking    | 3 ( 0.5)     |                            | 1 ( 0.5)               | 2 ( 0.8)               |
| Total               | 21 ( 3.4)    | 4 ( 2.3)                   | 9 ( 4.5)               | 8 ( 3.2)               |
| Totals              | 621 (100.1)  | 174 (99.8)                 | 200 (100.1)            | 247 (99.9)             |



depreciative behavior observed consisted of nuisance acts, and only constituted about one-fifth of the observed acts. Vandalistic acts were the least observed type of act accounting for about 17% of the observations. A fourth category of acts was included in this study which consisted of acts which were mainly of an etiquette type and mainly involved campers taking chopped firewood from other empty sites. These types of acts only made up about 3% of the observed acts. In most respects the three campgrounds exhibited similar patterns. The only real divergence was at Jonas Creek which had a great deal of problems with illegal picnics or day users perhaps due to its proximity to the Columbia Icefields, a major attraction of the mountain national parks. The design of Jonas Creek (asphalt road and log barriers) did appear to have some effect on the number of vandalistic acts (which most often involved cars or recreational vehicles being parked off the roads and on vegetation) as this campground had almost half the amount of vandalistic acts as did Mt. Kerkeslin and Rocky River.

The number of acts observed during each of the six research periods did not vary a great deal when one considers the number of parties present in each campground during each of the five day observation periods. The first period in Mt. Kerkeslin had the smallest proportion of observed acts which coincided with the small number of parties using the campground during that trip. Rocky River and Jonas Creek



TABLE 17  
NUMBER OF ACTS OBSERVED DURING  
EACH RESEARCH PERIOD

|                             | <u>Act Observed</u> | <u>Percentage<br/>of the whole</u> |
|-----------------------------|---------------------|------------------------------------|
| Mount Kerkeslin first trip  | 60                  | 9.7                                |
| Rocky River first trip      | 102                 | 16.4                               |
| Jonas Creek first trip      | 130                 | 20.9                               |
| Mount Kerkeslin second trip | 114                 | 18.4                               |
| Rocky River second trip     | 98                  | 15.8                               |
| Jonas Creek second trip     | <u>117</u>          | <u>18.8</u>                        |
|                             | 621                 | 100.0                              |

had nearly equal proportions of acts occurring during both trips except during the second trip to Rocky River when bad weather substantially affected the behavior patterns of campers.

As already mentioned it was in Jonas Creek that the largest proportion of legalistic activities were observed (Figure 32). It was also in Jonas Creek that the largest number of pet violations committed by campers occurred. Many campers in Mount Kerkeslin created health hazards by leaving food on tables or using fire in a dangerous manner. Mount Kerkeslin and Rocky River were the scene of a great many more natural environment damage acts<sup>1</sup> than was Jonas Creek (Figure

---

<sup>1</sup>Natural environment damage acts were those vandalistic acts which primarily damaged natural vegetation, such as parking cars on vegetation, cutting sticks for marshmallow roasting, placing tents on grass and other flora, using axes to cut into trees, and throwing grease or dishwater into nearby shrubs.





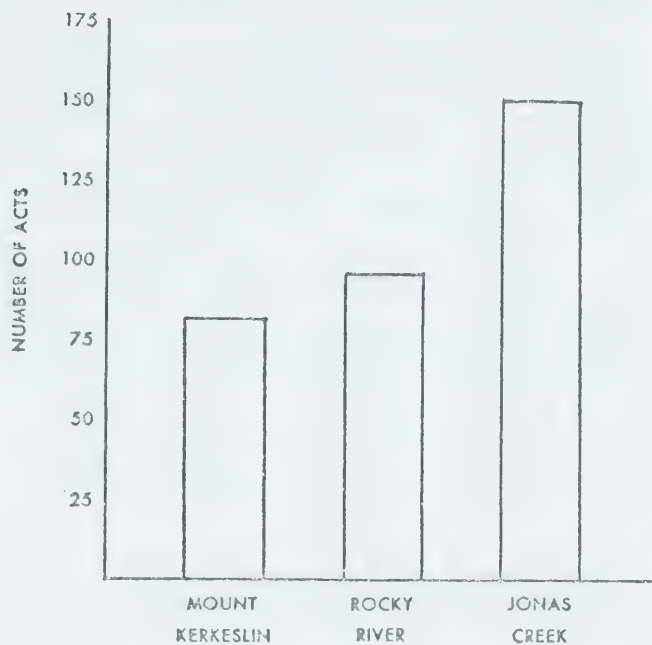


Figure 32. Campground rule violations.



Figure 33. Privacy violations.

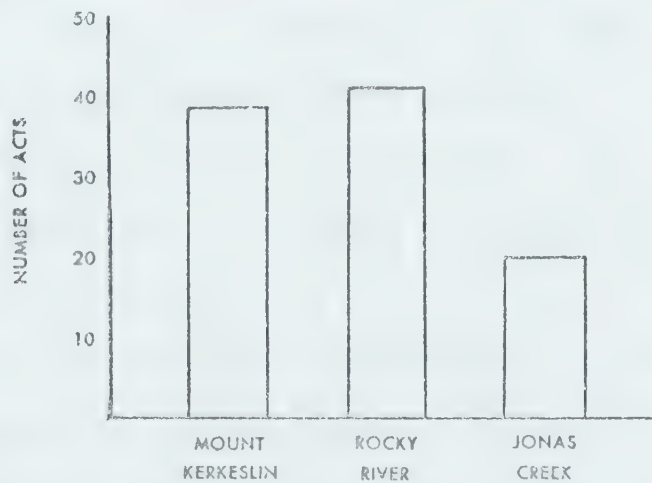


Figure 34. Natural environment damage acts.



34). The open conditions of Rocky River may have been responsible for that campground having the largest number of privacy violations (Figure 33), however, the number involved were not large as only a total of fourteen violations occurred. Primarily the variations in the types of acts committed within the three campgrounds were not extreme, but as will be discussed later these variations help to emphasize the specific problems to which the three campgrounds were subjected by either their facilities and design or by their location.

#### Type of Equipment Used and Depreciative Behavior

The types of equipment used by the offender did seem to have a slight effect on the number of acts and the type of acts committed. From the figures shown in Table 17 it is clear that the tent camper committed acts in greater proportion than his numbers. Most of the other equipment users committed acts more in proportion to their numbers except for the camper and the van owners who had proportionately fewer offenders. Figure 35 graphically represents the proportion of the various equipment owners involved in depreciative behavior within the three campgrounds. This pattern is very similar to the actual equipment distribution in the campgrounds (see Table 12).

Jonas Creek campers exhibited a similar pattern of acts in proportion to equipment distribution if the day user is not considered in the count. In Jonas Creek 47.4% of all



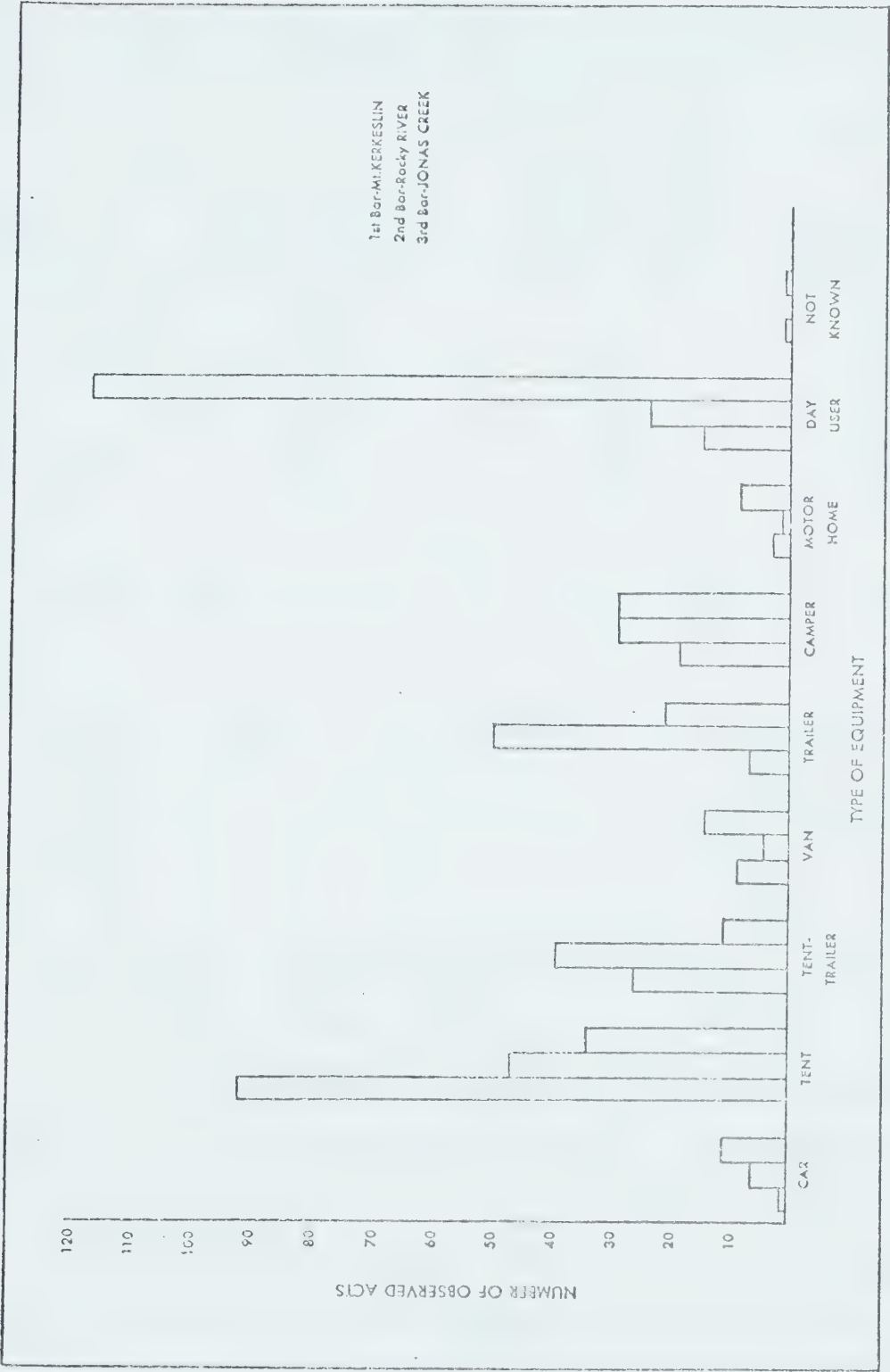


Figure 35. The number of observed acts committed by type of equipment used in the three campgrounds.



TABLE 18

TYPE OF EQUIPMENT AND THE PERCENTAGES  
OF ACTS COMMITTED

| <u>Equipment</u> | <u>Percentage of<br/>all campers</u> | <u>Percentage<br/>Committing<br/>Depreciative<br/>Acts (621)</u> | <u>Adjusted Per-<br/>centage (464) *</u> |
|------------------|--------------------------------------|------------------------------------------------------------------|------------------------------------------|
| Car or outside   | 3.6                                  | 3.1                                                              | 4.1                                      |
| Tent             | 30.0                                 | 27.9                                                             | 37.4                                     |
| Tent-trailer     | 16.4                                 | 12.2                                                             | 16.4                                     |
| Van              | 8.1                                  | 4.3                                                              | 5.8                                      |
| Trailer          | 14.8                                 | 12.6                                                             | 16.9                                     |
| Camper           | 21.2                                 | 12.4                                                             | 16.7                                     |
| Motor Home       | 3.6                                  | 2.1                                                              | 2.8                                      |
| Day User         | N.A.                                 | 25.1                                                             | -                                        |

\*Percentage without including the acts committed by the day user.

observed depreciative acts were committed by the day user. Just by being in the campground the day user groups were committing an offence because most of them picniced. However the day user often did more than just picnic as they allowed their pets freedom and sometimes were involved in natural environment damage. The proximity of Jonas Creek to a major attraction of Jasper National Park, the Columbia Icefields, may account for the high degree of day use as nearby picnic areas were often full. If the acts committed by the day user are subtracted from the acts observed in each campground the figures somewhat reverse themselves. If one only includes those acts committed by campers as indicators of the depreciative behavior in the three campgrounds under study then it appears that more depreciative behavior occurs in campgrounds





closer to a large metropolitan center. However, another factor which should be taken into account is the ease of access as it is much easier to enter Jasper National Park from the east than it is from the south (due to large uphill grades) which may be an even more important consideration than the actual mileage distance of a campground from a metropolitan center. A very limiting factor in this study was the fact that the place of an Albertan's residence was not obtained.

TABLE 19  
DEPRECIATIVE ACTS COMMITTED BY  
DAY USERS AND CAMPERS

| <u>Campground</u> | <u>Day Users</u> | <u>Campers</u> |
|-------------------|------------------|----------------|
| Rocky River       | 24( 15.5)        | 176( 37.9)     |
| Mount Kerkeslin   | 14( 9.1)         | 158( 34.2)     |
| Jonas Creek       | 117( 75.5)       | 130( 28.0)     |
| Totals            | 155(100.0)       | 464(100.0)     |

The two types of acts which were committed most frequently were campground rule violations and natural environment damage. Together they accounted for 68.3% of all the observed acts. As far as legalistic campground rule violations were concerned the type of equipment did have some effect on the number of acts committed. In Mt. Kerkeslin the campground violations largely involved tent owners who were responsible for 52.4% of all the legalistic violations there, even though tent campers only constituted 36.2% of



all the campers at Mt. Kerkeslin. Many of the activities in which a tent camper is involved take place outdoors and consequently one is able to observe their depreciative behavior more closely. Apart from this, tent owners seem to demand more from the environment due to their lack of personal facilities and consequently were more often involved in such depreciative behavior as sleeping in kitchen shelters, throwing dishwater and other food wastes into shrubs, and leaving after the 11:00 A.M. check out time. In Rocky River the trailer owner was involved in 28.3% of all legalistic acts (trailer constituted 21% of the campers there) with the other equipment types generally involved in proportion to their actual numbers. If the day user is not considered at Jonas Creek then this campground had the fewest number of legalistic acts committed (forty-eight) and the equipment types had little relationship to the acts committed. As far as natural environment damage was concerned the tenter appeared to be involved in these acts in greater proportion than his numbers (see Figure 36) in all three of the campgrounds. In Rocky River the trailer owner was also involved in a fair amount of environmental damage. In Mt. Kerkeslin the tent and the tent-trailer owners together accounted for 72% of all the natural environment damage observed. This type of damage often involved campers using tents or tent-trailers who placed their shelters on vegetation or tried to park their cars close to their shelters in convenient



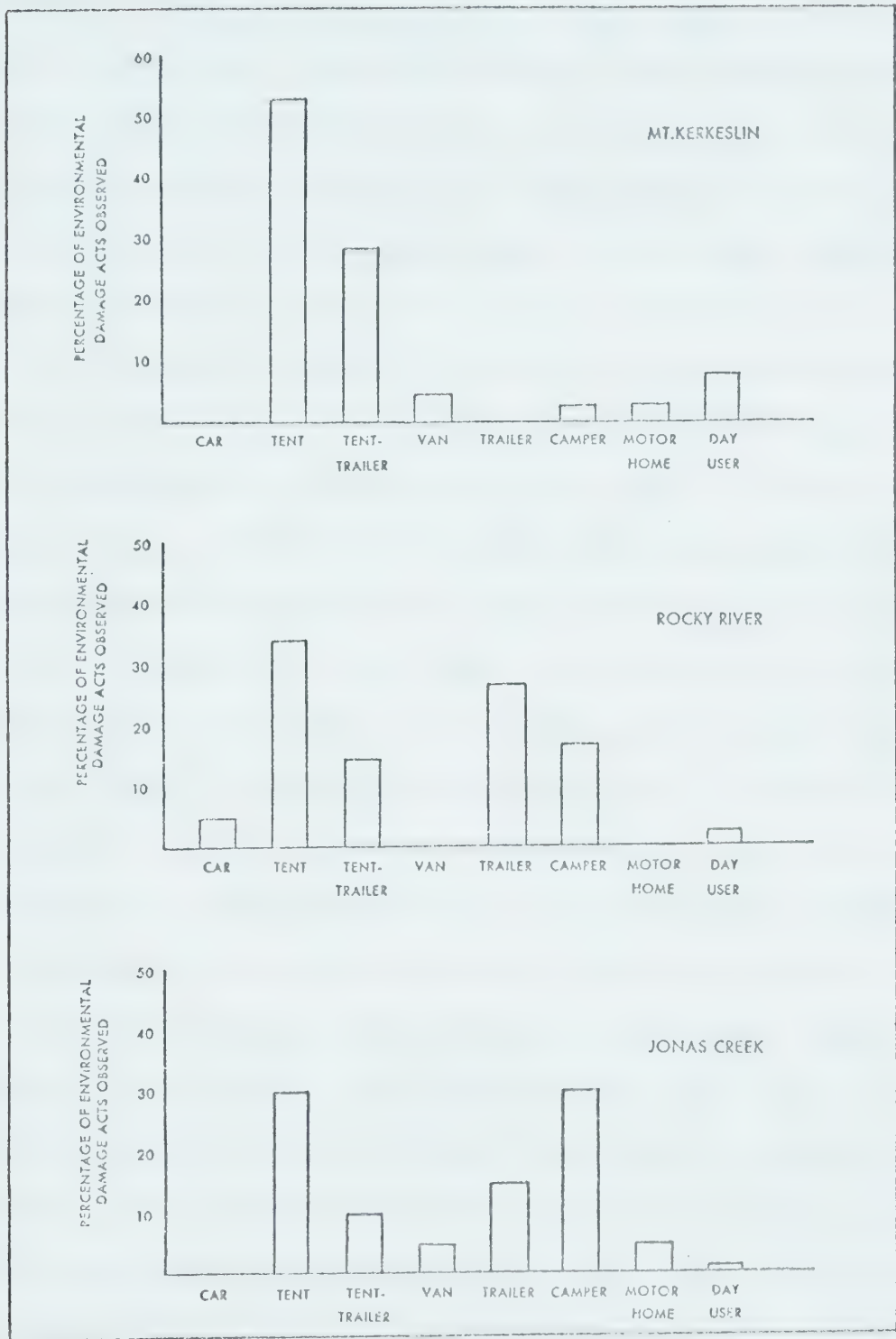


Figure 36. Natural environment damage act by the type of equipment.



locations. This pattern was not found in the United States study in developed campgrounds where tent campers were found to participate more frequently in nuisance acts. The very open nature of Mt. Kerkeslin and Rocky River may have been more attractive to the camper, but it did allow the camper a greater freedom to damage the natural environment by giving him the freedom to place his shelter wherever he pleased within his own site. It seemed ironic that the tent camper who is considered by some to hold the more traditional views and participate in the more traditional activities of camping would be responsible for more than his share of environment damage. Although the tent owner constituted 30% of all the campers during the thirty observation days he was responsible for 41% of all the environment damage acts. The tent and tent-trailer owners together accounted for 60% of all the environmental damage acts while those who owned trailers and truck campers were responsible for 28% of the damage. The over-representation of tent owners in the above type of act appears to be the only significant area where the type of equipment substantially affected the observed depreciative behavior. This over-representation of tent owners is especially important when one considers that many of the acts they were responsible for included damage which was of a fairly long lasting nature, such as trenches dug in the ground, ground cover removed from site areas, and crushed vegetation.





# Area of Residence and Depreciative Behavior

The area of the camper's residence seems to have a minimum effect on the amount of depreciative acts observed (see Table 20). Albertans appear to have been involved in

TABLE 20

## PERCENTAGE DISTRIBUTION OF RESIDENCE AREAS FOR CAMPERS AND OFFENDERS

| Residence<br>Area | Percentage<br>of all<br>campers | Percentage of<br>all Dep. Act<br>Observations | Percentage of<br>Depreciative Acts<br>in each campground |          |          |
|-------------------|---------------------------------|-----------------------------------------------|----------------------------------------------------------|----------|----------|
|                   |                                 |                                               | <u>K</u>                                                 | <u>R</u> | <u>J</u> |
| Alberta           | 36.4                            | 42.0                                          | 20.1                                                     | 68.0     | 36.4     |
| British Columbia  | 8.7                             | 8.9                                           | 13.2                                                     | 9.0      | 5.7      |
| Rest of Canada    | 17.1                            | 15.5                                          | 23.0                                                     | 15.0     | 10.5     |
| United States     | 37.4                            | 25.9                                          | 36.2                                                     | 4.0      | 36.4     |
| Europeans         | .5                              | .6                                            | 1.1                                                      | .5       | .4       |
| Unknown           | 2.3                             | 7.1                                           | 6.4                                                      | 2.5      | 10.6     |
|                   | 100.0                           | 100.0                                         | 100.0                                                    | 100.0    | 100.0    |

a greater proportion of acts than their actual numbers would indicate. The unusual finding here was that Albertans were not greatly over-represented at either Rocky River or Mt. Kerkeslin, but they were at Jonas Creek. Albertans made up about 25.7% of all the campers at Jonas Creek, but were responsible for 36.4% of the depreciative acts observed at Jonas Creek. The United States resident was not involved in as many acts as his distribution in numbers within the campgrounds which may have some relationship with the type of



equipment used by United States residents who use more recreation vehicles than Canadians. Campers from no one residence area were found to have been responsible for depreciative behavior in great excess to their actual numbers. However, the various types of acts did seem to be more affected by residence areas than were the overall numbers. Of all the campground regulation violations Albertans were responsible for 49% of these while United States residents were responsible for 25%. Albertans were responsible for 57% of all litter acts and for 59% of all natural environment damage. In Rocky River and Jonas Creek Albertans were over-represented in campground rule violations. Litter acts in Rocky River were almost exclusively committed by Albertans (97.7% of them) while at Jonas Creek United States residents were over-represented for litter. Natural environment damage was attributable to Albertans in greater proportions than their numbers in all three campgrounds. It appears that Albertans do engage in certain types of depreciative behavior in greater proportions than their distribution within the campgrounds would indicate. The reasons for this greater proportion of Albertans found committing certain types of depreciative behavior are not clear, however, it may be that campers who are from areas close by the park are less concerned about their behavior. It was found that local residents using the Boundary Waters Canoe Area were less sensitive concerning littering than those residents from further away (McCool and



TABLE 21  
PERCENTAGE OF VARIOUS ACTS COMMITTED BY ALBERTANS

| <u>Campgrounds</u> | <u>Percentage of<br/>Albertan Campers</u> | <u>Percentage of acts committed by Albertans</u> |                            |                           |
|--------------------|-------------------------------------------|--------------------------------------------------|----------------------------|---------------------------|
|                    |                                           | <u>Natural Environ-<br/>ment Damage</u>          | <u>Campground<br/>Rule</u> | <u>Pet<br/>Violations</u> |
| Rocky River        | 63.3                                      | 82.9                                             | 75.0                       | 62.5                      |
| Mount Kerkleslin   | 18.8                                      | 41.0                                             | 25.6                       | 45.5                      |
| Jonas Creek        | 25.7                                      | 45.0                                             | 46.0                       | 32.3                      |



Merriam, 1970). It could be that familiarity with an area and consideration of certain resources as a personal recreation supply can tend to make a camper feel that these areas are there for his pleasure alone. The motivations of campers from local areas to the east of Jasper National Park may lead the camper to regard the national park as an area of escape or as a change of scene where he does not need to restrict his behavior. Campers who travel further distances may be those who have developed a different camping ethic and regard themselves as visitors in an area while those from nearby may not regard themselves as visitors which could affect their subsequent behavior.

#### Personal Characteristics and Depreciative Behavior

Since each act of depreciative behavior could include more than one person the people involved in depreciative acts could be males and females together. An act situation therefore is not attributable to a male or a female. If all individuals are counted separately then 711 males and 513 females were involved in depreciative acts and in general more men were involved than women. About 60% of all depreciative act situations (370) were committed by men and women together, 32% (201) were committed by males alone, while only 8% (50) involved women alone. The campground violations were committed mainly by male/female groups (72.5%) while the natural environment damage involved mainly males alone (66%). The





primary group size was two as over half the acts were committed by groups of two. This is understandable as a little less than half of all the campers during the thirty days were groups of two. Usually an act situation involved a male and a female committing the same act (such as putting up a tent on vegetation) because little attempt could be made to assess who made the initial decision to commit the act. About 31% of all the acts involved a single person while only 5.3% of all the observed acts were committed by groups of three or more. Although age group divisions when divided by sex did not reveal a great deal of differences, the age group differences did appear to be related to the numbers of acts committed as adults were found to be largely responsible for most of the depreciative behavior observed (see Table 22). However, since the total number of campers in each category is not known the results of this analysis are mainly of a speculative nature. Children and teenagers were not found responsible for a great deal of depreciative behavior which varies substantially from the developed campground study (Clark, et. al., 1971b) where children and teenagers were found responsible for 43% of the depreciative behavior for which age could be determined. Children did not have a great deal of time to spend playing around the campground as parents were often concerned with their whereabouts consequently the nature of transient camping may not be conducive to great facility damage. Children were usually involved in nuisance



TABLE 22

TYPE OF ACTS COMMITTED BY INDIVIDUALS  
OF DIFFERENT AGE GROUPS

| Type of Act | Children  | Teenagers | 20-30     | 31-40     | Adults    |           |          |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
|             |           |           |           |           | 41-50     | 51-60     | 60+      |
| Legalistic  | 13( 1.7)* | 30( 3.9)  | 296(37.8) | 213(27.1) | 127(16.2) | 72( 9.2)  | 34( 4.3) |
| Nuisance    | 37(14.8)  | 15( 6.0)  | 89(35.5)  | 55(21.9)  | 35(13.9)  | 16( 6.4)  | 4( 1.6)  |
| Vandalistic | 13( 8.3)  | 11( 7.0)  | 50(31.9)  | 40(25.5)  | 24(15.3)  | 19(12.1)  | 0        |
| Etiquette   | 6(19.4)   | 4(12.9)   | 6(19.4)   | 7(22.6)   | 4(12.9)   | 4(12.9)   | 0        |
| Totals      | 69( 5.6)  | 60( 4.9)  | 441(36.0) | 315(25.7) | 190(15.5) | 111( 9.1) | 38( 3.1) |

\*Numbers in parenthesis are row percentages.



acts (54% of all the acts committed by children were of this type). Those campers from twenty to forty years of age accounted for about 62% of all the depreciative behavior observed. Whether or not this figure is greater than the percentage of campers of that age is not known for the observation period. From other studies it would appear that campers within this age group (twenty to forty years) are a rather large proportion of those who camp. The only differences found between males and females according to the type of acts committed were that a greater proportion of females fell into the legalistic category whereas a greater proportion of the males were involved with vandalistic acts than females.

#### Activities Associated with Depreciative Behavior

Findings of the northwestern United States Study suggested that children often were responsible for vandalistic activities. As pointed out in this study adults were primarily responsible for vandalistic behavior as well as most other types of depreciative acts which may be indicative of either fewer numbers of children and teenagers in undeveloped campgrounds which are transient in nature or that the type of activities in which transient campers engage are more restrictive as far as children and teenagers are concerned. Do these acts occur while the camper is involved



in specific activities? There were indications that in a little over half of the acts observed that there was no associated activity. In other words the act itself was the focus of the camper's attention and it did not appear that he was engaged in any other activity except the act (such as freeing a pet for the whole stay within the campground). Also included in this category were acts in which it was not clear whether there was an associated activity (see Table 23), which comprised about one-third of the acts under the no associated activity. Of those acts which were committed while the camper was engaged in another activity a great many of them were committed during camp chores or while the camper was setting up his equipment and getting settled in his site. Many different types of acts were done in these situations such as littering, which often occurred as the camper was leaving the campground, campground rule violations, freeing pets, excessive noise while setting up camp, taking chopped wood from various other sites, and especially vandalistic damage to the natural environment. Nuisance acts were an exception in that many of the acts such as freed pets and privacy violations occurred while the offender was moving through the campground. Noise acts were associated with entertainment, social interaction, or setting up camp. Health hazards often involved no associated activity or occurred during play situations such as children playing with fire, or during camp chores. A couple of health hazards





occurred during nature study when campers took a walk in the forest and left food open on their tables. The problem of bright lights at night was often associated with a group of campers who were setting up camp.

The three campgrounds did exhibit some differences regarding the activities associated with depreciative behavior. The number of acts which occurred during camp chores was much higher at Rocky River (see Figure 37) than at the other two campgrounds. This may point out the different clientele which was present at Rocky River on the weekends, (i.e. the local residents who were camping for the weekend). The acts committed during camp chores were varied and involved about nine different types. The number of acts committed while setting up camp (see Figure 38) clearly indicates that Mt. Kerkeslin had a problem with depreciative behavior in regards to this activity. This may serve to point out that Mt. Kerkeslin had a much more transient camping clientele than either of the other two campgrounds and that it had a much greater problem with people camped out of designated sites. The type of acts occurring while campers set up their camp were mainly campground rule violations (such as not camping in designated sites) and natural environment damage. Jonas Creek although as transient in nature as Mt. Kerkeslin had only a few more acts committed there while campers set up their camp than in Rocky River. Here again part of this may be attributable to the more efficient design of Jonas Creek which did appear to limit the amount of





Figure 37. Acts committed during camp chores.

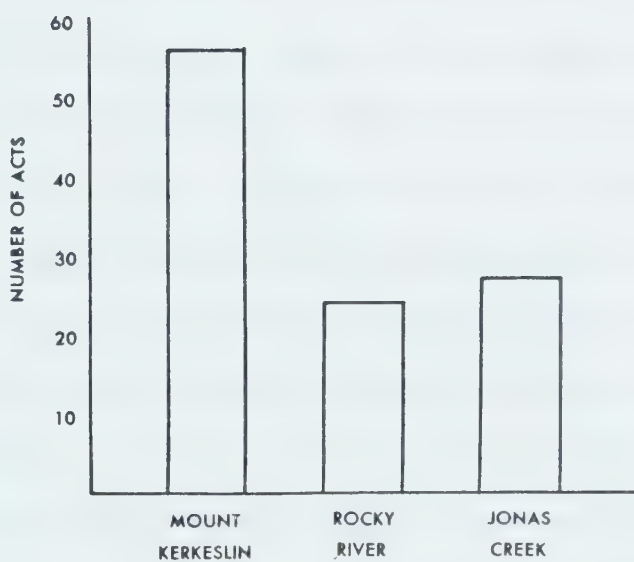


Figure 38. Acts committed while setting up camp.



environmental damage which occurred there and to the fact that many campers using Jonas Creek had recreation vehicles which just required parking rather than really having to set up equipment within the site. Of those environmental damage acts which occurred while campers set up their equipment seventeen occurred at Mt. Kerkeslin, eight at Rocky River, and five at Jonas Creek. The environmental damage which occurred at Rocky River was usually associated with camp chores.

The activity associated with depreciative behavior did appear to have some effect on the type of act which was committed. Although a great many acts do not have an associated activity some types of acts are more likely to occur during certain situations. Natural environmental damage was most likely to occur when the camper was involved in camp chores, setting up camp, or entertainment (such as children's play). Other types of acts such as campground violations often occur during camp chores or while setting up camp, but are by no means restricted to these situations. Nuisance acts occur under a variety of situations while camper etiquette problems occur during camp chores or setting up camp. In a transient undeveloped campground it does not appear that entertainment or play is an activity which involves a great deal of depreciative behavior, perhaps because this activity is fairly restricted and the objects available for play



TABLE 23

ASSOCIATED ACTIVITY WHEN DEPRECIATIVE ACTS WERE COMMITTED

| <u>Depreciative<br/>Behavior</u> | <u>Enter-<br/>tainment</u> | <u>Camp<br/>Chores</u> | <u>Nature<br/>Study</u> | <u>Social<br/>Inter-<br/>action</u> | <u>Moving<br/>through<br/>camp</u> | <u>Setting<br/>up camp</u> | <u>No Assoc-<br/>iated<br/>activity</u> |
|----------------------------------|----------------------------|------------------------|-------------------------|-------------------------------------|------------------------------------|----------------------------|-----------------------------------------|
| Legalistic                       | 18( 4.9)                   | 38(10.3)               | 1( .3)                  | 3( .8)                              | 2( 0.5)                            | 63(17.1)                   | 244(66.1)                               |
| Nuisance                         | 17(13.7)                   | 20(16.1)               | 2( 1.6)                 | 4( 3.2)                             | 19(15.3)                           | 10( 8.1)                   | 52(41.9)                                |
| Vandalistic                      | 17(15.9)                   | 22(20.6)               | 2( 1.9)                 | 2( 1.9)                             | 4( 3.7)                            | 30(28.0)                   | 30(28.0)                                |
| Etiquette                        | 0                          | 15(71.4)               | 0                       | 0                                   | 0                                  | 4(19.1)                    | 2( 9.5)                                 |
| Totals                           | 52( 8.4)                   | 95(15.3)               | 5( 0.8)                 | 9( 1.4)                             | 25( 4.0)                           | 107(17.2)                  | 328(52.8)                               |





destruction are fairly restricted. The predominance of camp chores and setting up camp as activities which often involve depreciative behavior may point out that a great deal of depreciative behavior does not occur intentionally but as a matter of course.

The Apparent Associated Motivational  
Characteristics of  
Depreciative Behavior

As each act was observed an attempt was made to determine the motivational characteristics for each act. This was not possible in about 17% of the acts. For the other acts five possible motivational characteristics were considered: 1) entertainment or fun, 2) convenience, 3) disregard for the rules or consequences of the act, 4) ignorance, or 5) the rules interfered with a goal. Legalistic campground violations could be mainly attributed to: 1) convenience, the act was done to enhance the camper's experience, 2) because he was ignorant of the rules, or 3) because he knew the rules but they interfered with his goals (such as lighting a fire in a stone ring). Those who used the campgrounds for picnics often did so for reasons of comfort coupled with ignorance, but some coupled with disregard for the rules because they would stop by the entrance where the bilingual no picnicing sign was located and then drive in and picnic. Jonas Creek had more campground rule violations associated with ignorance than either of the other two camp-



TABLE 24

APPARENT ASSOCIATED MOTIVATIONAL CHARACTERISTICS  
OF DEPRECIATIVE BEHAVIOR

| Depreciative<br>Behavior | Enter<br>tainment | Conven-<br>ience | Dis-<br>regard | Ignor-<br>ance | Rules                  |              | %<br>Totals |
|--------------------------|-------------------|------------------|----------------|----------------|------------------------|--------------|-------------|
|                          |                   |                  |                |                | interfere<br>with goal | Not<br>Known |             |
| Legalistic               | 13( 3.5)          | 75(20.3)         | 68(18.4)       | 97(26.3)       | 44(11.9)               | 72(19.5)     | 99.9        |
| Nuisance                 | 12( 9.7)          | 0                | 42(33.9)       | 33(26.6)       | 7( 5.7)                | 30(24.2)     | 100.0       |
| Vandalistic              | 25(23.4)          | 32(29.9)         | 18(16.8)       | 16(15.0)       | 7( 6.5)                | 9( 8.4)      | 100.0       |
| Etiquette                | 0                 | 16(76.2)         | 3(14.3)        | 1( 4.8)        | 0                      | 1( 4.8)      | 100.1       |
| Totals                   | 50( 8.1)          | 125(20.1)        | 131(21.1)      | 147(23.7)      | 58( 9.3)               | 110(17.7)    | 100.0       |



grounds largely due to the number of day users using Jonas Creek, despite the fact that there was sign at the entrance of the campground expressly prohibiting both picnicing and fires outside of the provided places. Litter acts were largely associated with disregard as most people were aware that littering was a violation of regulations and laws all over North America. The freeing of pets in the campgrounds seemed to be motivated by the desire to allow the pet freedom which meant that the camper either disregarded the rules or was ignorant of them. In many pet violations the motivational association was not readily apparent because it was not known if the offender was aware of the rules or not. Noise and privacy violations often appeared to be committed for rather selfish reasons such as enjoyment or convenience and many campers indicated a great disregard for the effects of their behavior on others. Health hazards seem to have been largely due to convenience and were characterized by ignorance of the effects and most often involved leaving food outside. Vandalism was one type of activity which was motivated by entertainment in some cases (usually in play situations) and in others by convenience. The placing of an ax in a log barrier or picnic table was convenient as was the parking of a vehicle on vegetated areas. Chopped wood was taken from empty sites almost exclusively for convenience sake. In Jonas Creek a great many natural environment damage acts were motivated by entertainment (such as the cutting of shrub branches for





marshmallow roasting sticks) while at Mt. Kerkeslin they were usually motivated by convenience (a greater number of people parking their vehicles on grassy areas).

Motivation is a very difficult aspect of depreciative behavior to ascertain while observing. In order to make correct judgements one often must be aware of the state of an individual's knowledge, which is almost impossible unless the individual is approached. Since no discussion took place between the researcher and the offender the data on motivation must be used cautiously. Overall it can be said that most depreciative acts in the three campgrounds were characterized by either convenience, disregard, or ignorance. These findings differ somewhat from those of Clark, Hendee, and Campbell (1971:8) because in this study entertainment was not found to be a prime motivating force. This, of course, is partly attributable to the fact that Clark et. al. (1971b) found children motivated by entertainment to be largely responsible for vandalistic acts while in this study children were not found responsible for a great deal of vandalistic behavior. Often the short length of stay and the nature of the camper's visit were not conducive to the type of depreciative behavior which may be motivated by entertainment (such as public property damage). In this study it was found that convenience was a more important motivational characteristic as many aspects of campground design were found to be inhibiting by some campers and not at all clear to others





(such as poor site designation) which may account for the number of acts apparently associated with convenience.

### The Victims of Depreciative Behavior

People and the natural environment seemed to suffer the most as a result of depreciative behavior. About one fourth of all depreciative acts (most of which were legalistic) had no victim at all as they did not apparently affect any particular aspect of the social or natural environment (such as leaving after the checkout time or picnicing in an empty campground). Those acts for which the victim was not known all involved legalistic campground violations (see Table 25) and usually referred to the day user who picniced, because his motivation could not be ascertained since it was often not known if he had seen and understood the no picnicing sign at the campground entrance. In many respects the day user who was often picnicing in an empty campground was not really bothering any people who were trying to camp, except when they were using the kitchen shelters on rainy days. Although day users may have ignored the rules they were probably motivated to a large extent by convenience. The picnicher may have felt amply justified in using a campground as he generally was not affecting other campers. Legalistic violations often had people or the natural environment as victims, but also had the rules themselves as victims since many campers were aware of the rules and did not care to



TABLE 25  
THE VICTIMS OF DEPRECIATIVE BEHAVIOR

| Depreciative<br>Behavior | <u>People</u> | <u>Public<br/>Property</u> | <u>Natural<br/>Environment</u> | <u>Rules</u> | <u>No<br/>Victim</u> | <u>Not<br/>Known</u> |
|--------------------------|---------------|----------------------------|--------------------------------|--------------|----------------------|----------------------|
| Legalistic               | 75 (20.3)     | 0                          | 52 (14.1)                      | 65 (17.6)    | 144 (39.0)           | 33 ( 8.9)            |
| Nuisance                 | 105 (84.7)    | 0                          | 1 ( 0.8)                       | 2 ( 1.6)     | 16 (12.9)            | 0                    |
| Vandalistic              | 3 ( 2.8)      | 6 ( 5.6)                   | 98 (91.6)                      | 0            | 0                    | 0                    |
| Etiquette                | 21 ( 100)     |                            |                                |              |                      |                      |
| Totals                   | 204 (32.9)    | 6 ( 1.0)                   | 151 (24.3)                     | 67 (10.8)    | 160 (25.8)           | 33 ( 5.3)            |



follow them or felt that they were irrelevant (such as sleeping in a kitchen shelter, littering, or leaving after the check out time). By their very nature nuisance acts and camper etiquette acts affected people. Some pet violations and health hazards involved no victims as the act did not really affect anything (such as food left out on a table for a few hours or a pet free in his owner's site only). Vandalistic acts usually affected the natural environment, but in six cases they affected public property and in three cases people.

#### Witness Reactions to Depreciative Behavior

The small campground size and the amount of a camper's activity which takes place in his own site tends to reduce the number of witnesses to many depreciative acts. For those acts which did have witnesses it is plainly obvious from the figures shown in Table 26 that a norm of non-involvement prevails. If one does not count 42.8% of the acts in which there were no witnesses and if one uses the remainder as 100% one finds that in 69.5% of the cases for which there were witnesses no reaction occurred (the witness was either indifferent to the act or did not see it) and 9.8% of the time the act was ignored (the witness obviously saw the act but chose to ignore it or pay no further attention to it). In only 5% of the acts was any reaction observed at all and of these, 2.9% were approval reactions. Nuisance acts received the



TABLE 26

## WITNESS REACTIONS TO DEPRECIATIVE ACTS

| Depreciative<br>Act | No one<br>around | Approved<br>the Act | No<br>Reaction | Ignored<br>Act | Commented<br>to others | Confronted<br>Offender | Not<br>Known |
|---------------------|------------------|---------------------|----------------|----------------|------------------------|------------------------|--------------|
| Legalistic          | 178(48.2)        | 16( 4.3)            | 136(36.9)      | 16( 4.3)       | 2( 0.5)                | 1( 0.3)                | 36( 9.8)     |
| Nuisance            | 32(25.8)         | 0                   | 65(52.4)       | 14(11.3)       | 6( 4.8)                | 1( 0.8)                | 6( 4.8)      |
| Vandalistic         | 48(44.9)         | 2( 1.9)             | 37(34.6)       | 2( 1.9)        | 2( 1.9)                | 1( 0.9)                | 15(14.0)     |
| Etiquette           | 9(42.9)          | 9(42.9)             | 3(14.3)        | 0              | 0                      | 0                      | 0            |
| Totals              | 266(42.8)        | 18( 2.9)            | 247(39.8)      | 35( 5.6)       | 10( 1.6)               | 3( 0.5)                | 42( 6.8)     |





most negative reactions (a witness commenting to another camper) as these were the types of acts which usually affected other campers the most. In three act situations (one of each major act type) a witness confronted the offender with a verbal comment which in all three cases caused the offender to cease his activity.

In all three campgrounds this pattern of non-involvement prevailed. At no time was any activity reported to an attendant or a warden which may be very understandable as these personnel were available for about a total of one hour an evening. Warden stations were never very far away (five to eight miles) from any of the campgrounds, but no camper during the thirty days felt any problem was serious enough to travel to a station. From the data it appears that campers either do not care about depreciative behavior, or prefer to keep their comments to themselves, which seems a shame since offender reactions to witness comments are very dramatic in that a camper will usually immediately discontinue an offensive activity if another camper makes any comment concerning that activity. It may be that a verbal comment from a fellow recreationist has a greater impact on a camper engaged in a depreciative act than a comment from an official source.

#### Official Actions

In all cases of official action taken within the



three campgrounds a verbal warning was involved, with the exception of one written warning placed on a vehicle. There were twenty-four of these verbal warnings given and of these four were in Rocky River, eight in Jonas Creek, and eleven in Mt. Kerkeslin. Over half of these warnings were given for campground rule violations (most at Mt. Kerkeslin) which involved camping in non-designated sites or fire in illegal places. Five warnings were given for pets (all in Jonas Creek) and four for natural environment damage acts (cars parked on vegetation). Verbal warnings usually involved males but no specific age group predominated. Of those who received a warning from a Jasper National Park Visitor Services personnel 27.7% of them ignored the warning by renewing the activity when the management personnel had left the campground. All warnings regarding campground violations were complied with, but two warnings involving pets were ignored, two concerning cars parked on vegetation (one of which was a written warning), and one relating to tents erected outside of a site were not complied with. Management personnel were not present in the three campgrounds most of the time and usually it was the mobile attendants who spent the most time in them. Mobile attendants can give verbal warnings to campers, but they must inform the wardens if any more severe action is to be taken, such as the issuing of a fine. One incident in Mt. Kerkeslin involved a group of campers who had erected tents down by the Athabasca River. One member



of the party was asked by a mobile attendant to have these tents removed. When they were not the warden was informed who then asked a member of the party to move the tents, but since they were leaving the next morning this warning was also ignored. Perhaps due to a poor judicial fining structure wardens are reluctant to act as policemen. This may be changing in national parks as more and more people use the parks every summer, but it does appear that a more vigorous and encompassing enforcement structure is needed if depreciative behavior is to be substantially reduced.

#### Rule Postings and Depreciative Behavior

In general very little variation was found between the first and second research periods, which tended to point out that rule postings are either ignored or disregarded by those who read them. Admittedly, not every camper who was present during the thirty observation days committed a depreciative act, but then again no one group of campers was found to have been responsible for most or all of the depreciative behavior. Actually the rule postings may have had subtle effects, which the research techniques were unable to detect. However, from past evidence (Marler, 1971; Campbell, Hendee, and Clark, 1968) it appears that written rules on signs or postings do not have a great effect on camper behavior. In this study this is evidenced by the number of campers who chose to use Jonas Creek as a picnic area in spite of the



large sign at the entrance prohibiting such use.

### Conclusions Regarding Depreciative Behavior as Observed

The findings on observed depreciative behavior in three undeveloped automobile campgrounds in Jasper National Park are suggestive that the camper is responsible for a moderate amount of depreciative behavior. Contrary to some theories most of the undesirable behavior found in this study was not caused by "slobs" or teenage vandals. In many cases the average camper may not be aware that he and other campers like him are responsible for acts which when aggregated can have a detrimental effect on the environment. Comparison of general camper characteristics in the three campgrounds under study and the characteristics of those responsible for depreciative behavior does not reveal that any one specific type of camper is responsible for the majority of depreciative acts. It is difficult to judge the actual magnitude of the problem in undeveloped campgrounds in the Rocky Mountain national parks. No claim has been made here that the above data is truly representative of the total picture concerning depreciative behavior. There is only so much that one researcher can observe. The inadequacy of the data is somewhat suggested by a collection made on the second trip in each of the campgrounds of all the accumulated bottle caps, flip tabs, and bread loaf fasteners that could be found (see Figures 39, 40 and 41). From the number of these items





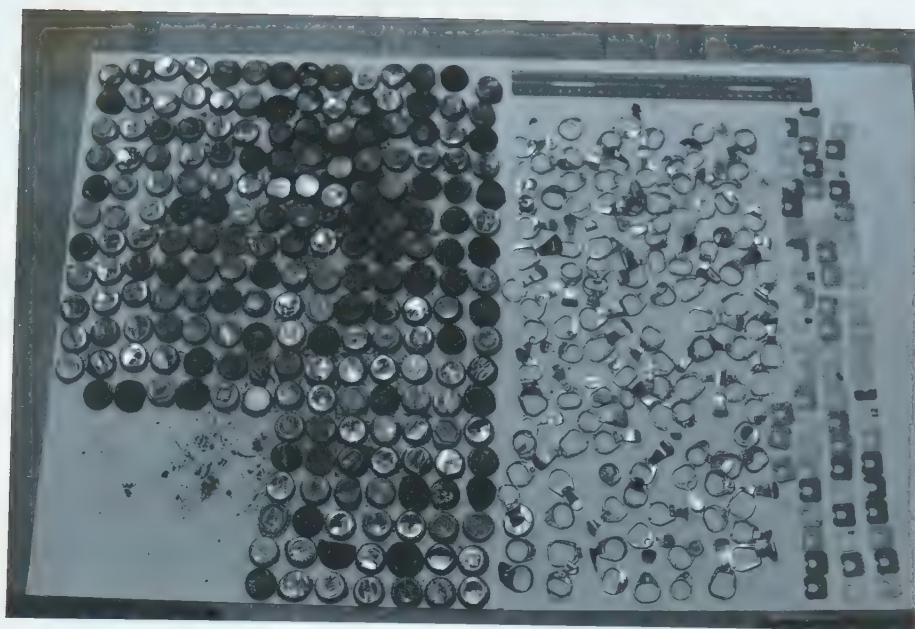


Figure 39. Litter collections from Mt. Kerleslin campground July 15-20.

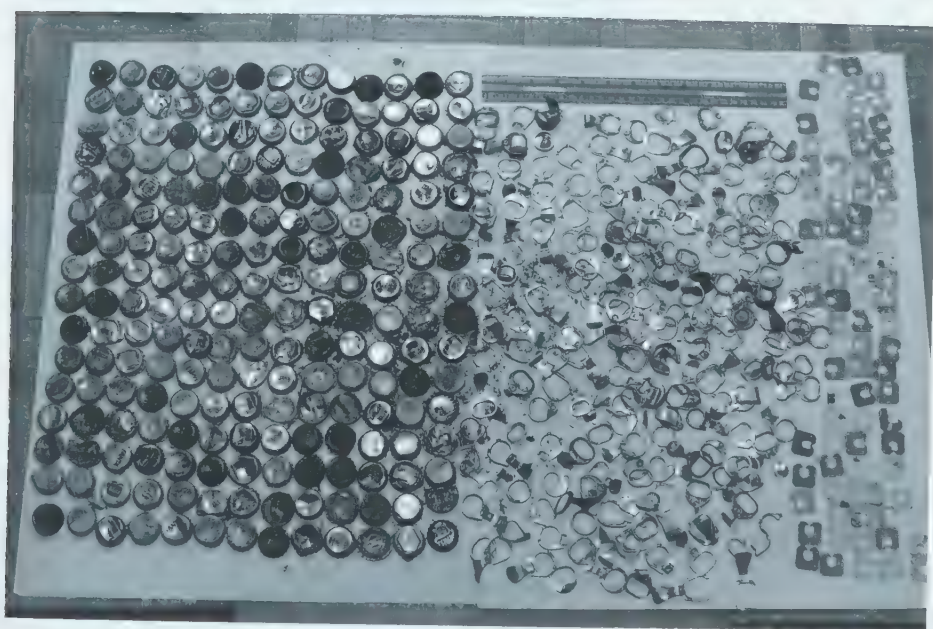


Figure 40. Litter collections from Jonas Creek campground August 25-30.



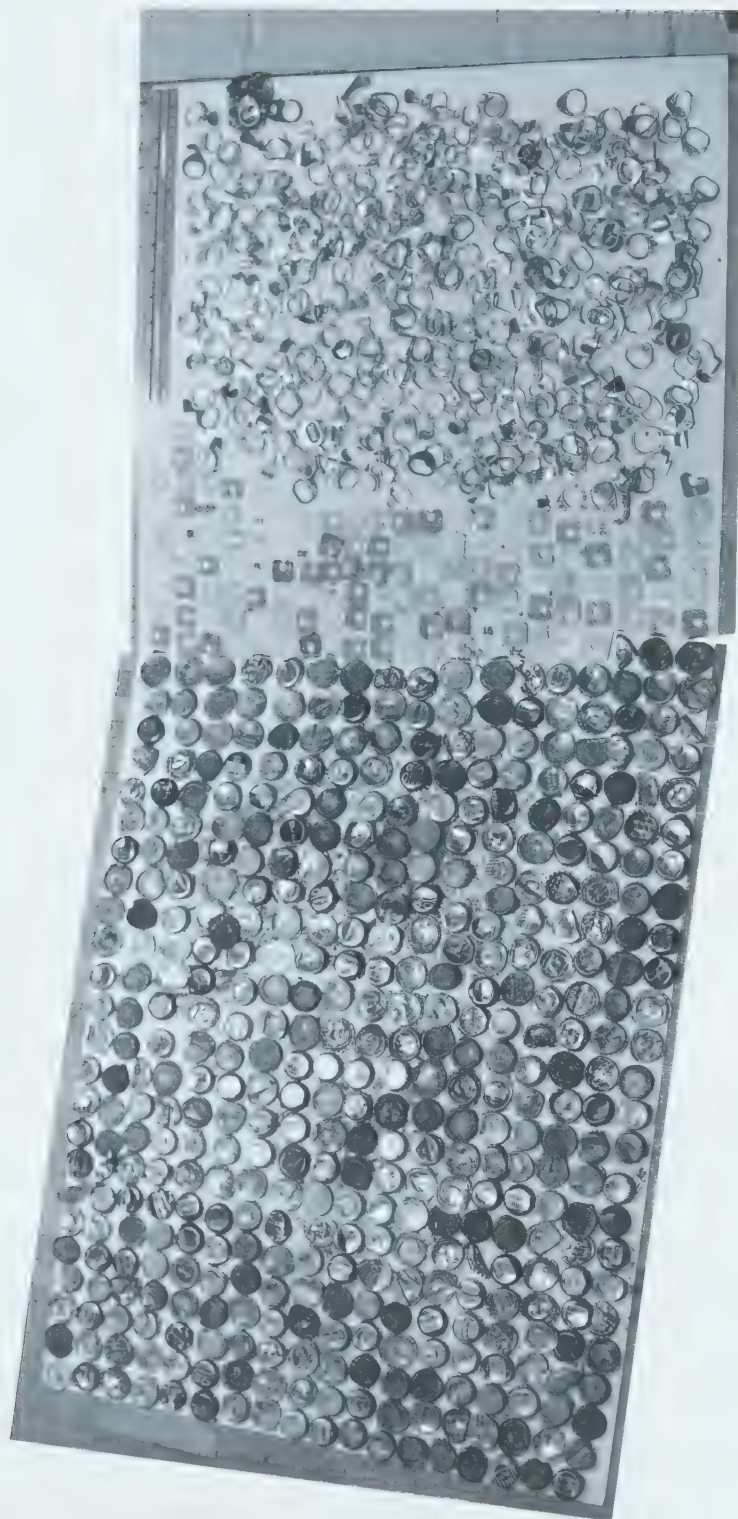


Figure 41. Litter collection made at Rocky River Campground  
August 16-20 (Study half only).





alone and the fact that the litter level was recorded as high on the second trip to each campground it seems clear that the number of litter acts observed may have been much lower than they actually were. Depreciative behavior in these campgrounds not only affected the social environment in general, but had affects on the natural environment. In the Pacific Northwestern study the natural environment was the victim in 20% (out of 401 acts) of the observed depreciative acts, while in this study the natural environment was the victim in 24% (out of 621) acts) of the observed depreciative acts. In this study people were the victims of 33% of the acts observed, but in the United States study in developed campgrounds (Clark, et. al., 1971b) they were the victims in 58% of the depreciative acts. Proportionately the amount of depreciative behavior directed at the natural environment was the same in both studies, but people seemed to have been the victims in a greater proportion of depreciative acts in the developed campground.

The extent of depreciative behavior as observed may warrant a further look at proposals to close these campgrounds or enlarge them to the point where it would be feasible to have a permanent staff member responsible for one campground. Currently the climate within these campgrounds appears rather conducive to depreciative behavior with little consequence to the offender. This freedom in relation to depreciative behavior becomes very detrimental



when one considers the use and overuse to which these campgrounds are subjected. The natural limits of carrying capacity have already been exceeded in Rocky River where very little vegetation exists between the sites and encroachments are being made on Mt. Kerkeslin as the ability of the vegetation to regenerate itself becomes less as more wear is exerted upon it by increasing numbers of campers. The consistent use of a campground over its official site capacity throughout the summer months does affect the amount of depreciative behavior which takes place in a campground and has and even greater effect on those campers who cannot find sites to stay in and must camp in a picnic area or off the road. The observation results also indicate that campground design (a manipulation factor which tends to increase an area's carrying capacity limits) has a great effect on depreciative behavior especially in relation to natural environment damage acts. The potential changes of campground design could do much to alter the depreciative behavior picture within the three campgrounds. Campgrounds such as Rocky River and Mt. Kerkeslin which are open and have little site distinction are not only confusing to many campers, but are easily overloaded as campers come in over the capacity limit and make their own campsites. The design of Jonas Creek must be praised for its ability to restrict the amount of vehicle damage done to the natural environment. With the kinds of equipment in use at Jonas Creek the asphalt road and log barriers meant that more parties than the official site





capacity limit could be tolerated without a great deal of damage being done to the natural environment.

Two further findings are worth special emphasis in these conclusions. For those campers who prefer the more traditional equipment types such as tents special provisions should be made such as larger flat sites or the repair of tent platforms as tent owners often create their own requirements if they are not met (see Figures 42 and 43). The tent owner is often the one who demands the most from the environment rather than the owner of a large recreation vehicle (such as that in figure 34) which is self contained. Although it was not found that Rocky River had an overwhelmingly greater number of depreciative acts committed by the camper it was found that local residents from Alberta and British Columbia did participate in a greater number of depreciative acts than their actual proportion would indicate. This suggests that the amount of depreciative behavior in which a camper may engage might be partially a function of his distance from home as those from further away were found to participate in depreciative behavior in a proportion lower than their actual numbers. It does appear that in campgrounds where local residents predominate (such as those within short distances of a large metropolitan market) depreciative behavior might occur more frequently. Much more research will be needed before this can be accepted as a reliable theory.



Figure 42. Trench dug by tent camper  
on July 8 in Jonas Creek.,

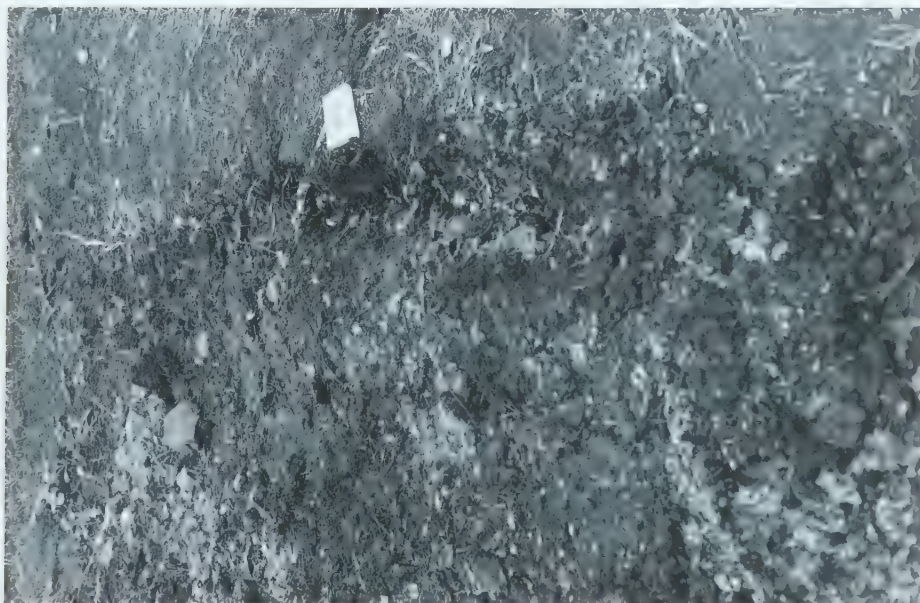
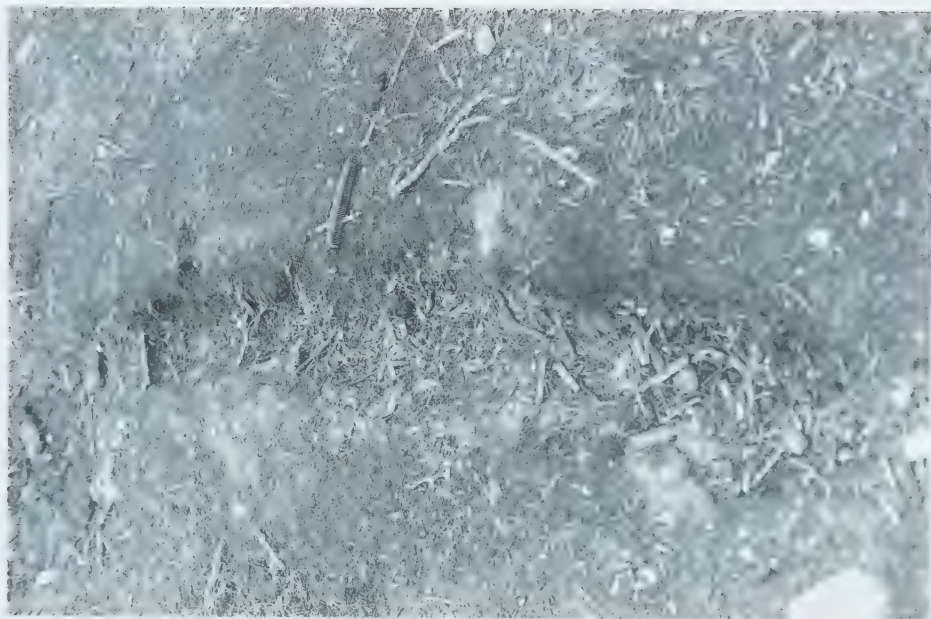


Figure 43. The same trench from  
Figure 42 photographed  
on September 5.





The results of this observation study can be used to show that a great deal of depreciative behavior does not affect either the social or natural environment, but the effects of rule disobedience can be more subtle because it reflects a general disregard for many national park rules and social conventions. Exactly how this behavior affects the social limits of carrying capacity is primarily the topic of the next chapter, but it can be noted that at least 20% of all the observed depreciative behavior had direct effects on the natural environment of the campground. Sheer increases in the number of campers using a campground will bring about changes in the natural environment and these changes may lead the camper to feel that this quality of a natural camping environment is what he must expect in a Canadian national park.





## CHAPTER VI

### CAMPER OPINIONS AND ATTITUDES TOWARDS DEPRECIATIVE BEHAVIOR

A great many of those who camped in the three undeveloped automobile campgrounds were not aware that a certain amount of depreciative behavior did take place nor did they seem to perceive that it was taking place within the particular campground in which they were staying. The interview itself was primarily an attempt to assess the campers' attitudes and opinions towards depreciative behavior in general to determine if any norms were prevalent or if there was any attitudinal variations present between the three campgrounds. Certain attitudinal norms were found to prevail but very little difference was found between the attitudes held in each of the campgrounds. It appears that campers within the three campgrounds held very similar ideas towards depreciative behavior. The first part of this chapter is devoted to a discussion of the characteristics of the campers who were interviewed for reasons of comparison. The rest of the chapter deals with the results of the attitude and opinion questions and an attempt is made to discuss some weaknesses of the interview and make a few tentative conclusions from the data presented.

#### Characteristics of Interviewed Campers

As mentioned previously twenty-five campers were





interviewed every five days for a total sample of one hundred and fifty. A total of fifty-two males and forty-eight females were interviewed. A breakdown (Table 27) of the various

TABLE 27  
AGES OF THE INTERVIEWED CAMPERS

|        |          |          |          |        |        |
|--------|----------|----------|----------|--------|--------|
| 18-20  | 21-30    | 31-40    | 41-50    | 51-60  | 61+    |
| 2(1.3) | 59(39.3) | 39(26.0) | 34(22.7) | 7(4.7) | 9(6.0) |

age groups revealed that about 40% of those interviewed were twenty-one through thirty years of age and although no statistics were available on the age breakdown of campers in the three campgrounds this percentage would appear to be about average based on figures from other studies of camper characteristics. Males and females were divided equally into the various age groups with an exception in the sixty-one years of age and over category where twice as many females as males were interviewed. The average number of years camped was 12.4, but the standard deviation (11.5 years) revealed that there was a wide variation for individual campers. About 37% of the sample had camped five years or less, 22% had camped six to ten years, 23% had camped eleven to twenty years, and about 17% had camped more than twenty years. The number of years which a person had camped did not reveal the amount of experience which a camper had had with camping because the number of days a year which he camped did vary. On the average about half of the



sample had camped from one to two weeks a year during the last five years while the other half of the campers had camped between fifteen and fifty days a year during the last five years. A very small number (six) of the campers had camped on the average over fifty days a year. The overall average number of days camped a year was twenty-five days with a standard deviation of thirty-one days.

Two characteristics which did indicate some variation between the campgrounds was party size and the number of nights campers spent in the campground. The average party size was 3.3 people with a standard deviation of two. This may have indicated that overall the party size in these campgrounds was quite small. The only campground which had a slightly higher average party size (four) was Rocky River, a variation which was also evident in the overall camper count and can be attributed to the fact that the first trip to Rocky River included one three day holiday weekend. Of all the campers interviewed 40% were parties of two and 32% were parties of three and four. Revealed in the interview data was a bias towards the larger parties as 5.3% were parties between seven and twelve while only about 3% of all the campers in the three campgrounds during the thirty days were parties of that size. In all three of the campgrounds the majority of campers were only expecting to stay a single night (see Table 28). Rocky River campers exhibited a difference between the first and second trips as most campers were staying more than one



TABLE 28

## AVERAGE EXPECTED LENGTH OF STAY OF INTERVIEWED CAMPERS

---

|                       | Whole       | K-1         | K-2         | R-1         | R-2         | J-1         | J-2         |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Mean                  | <u>1.65</u> | <u>2.24</u> | <u>1.92</u> | <u>2.04</u> | <u>1.40</u> | <u>1.16</u> | <u>1.16</u> |
| Standard<br>Deviation | 1.48        | 2.89        | 1.41        | 1.10        | .65         | .37         | .55         |

---

night over the holiday weekend. However, of those interviewed five campers expected to stay more than four nights and all of these were in Mt. Kerkeslin. During the first research period at Mt. Kerkeslin a number of campers stayed longer than two nights and these campers had the largest average expected length of stay. This trend was much stronger for those campers interviewed during the first research period before the peak camping season had begun. Jonas Creek campers exhibited a strong pattern of short expected stays in the campground as they had the lowest averages and standard deviations (as shown in Table 28) which indicated a clustering of campers around a single night stay.

Some deviation from the camper count occurred when equipment types and areas of residence were considered. When all the interviewed campers are grouped as a whole the equipment types they used did not differ too radically from the population from which they were drawn (Compare Tables 12 and 29), however, too many campers using a car or sleeping outside and campers using bicycles and tents were interviewed while too few campers using truck campers and vans were



TABLE 29  
TYPE OF EQUIPMENT USED BY THE INTERVIEWED CAMPERS

| Type of Equipment   | Whole      | K-1     | K-2    | R-1     | R-2    | J-1    | J-2    |
|---------------------|------------|---------|--------|---------|--------|--------|--------|
| Car or outside Tent | 10 ( 6.7)* | 1 ( 4)  | 1 ( 4) | 1 ( 4)  | 1 ( 4) | 2 ( 8) | 3 (12) |
| Tent-trailer        | 53 (35.3)  | 17 (68) | 7 (28) | 10 (40) | 5 (20) |        | 6 (24) |
| Trailer             | 24 (16.0)  | 0       | 5 (20) | 7 (28)  | 7 (28) | 4 (16) | 1 ( 4) |
| Camper              | 20 (13.3)  | 2 ( 8)  | 4 (16) | 5 (20)  | 4 (16) | 2 ( 8) | 3 (12) |
| Motor Home          | 24 (16.0)  | 3 (12)  | 4 (16) | 2 ( 8)  | 4 (16) | 8 (32) | 4 (16) |
| Van                 | 5 ( 3.3)   | 0       | 1 ( 4) | 0       | 2 ( 8) | 0      | 2 ( 8) |
| Bicycle & Tent      | 7 ( 4.7)   | 1 ( 4)  | 2 ( 8) | 0       | 0      | 0      | 4 (16) |
| Motorbicycle & Tent | 5 ( 3.3)   | 0       | 1 ( 4) | 0       | 0      | 1 ( 4) | 2 ( 8) |
|                     | 2 ( 1.3)   | 1 ( 4)  | 0      | 0       | 2 ( 8) | 1 ( 4) | 0      |
|                     | 150        | 25      | 25     | 25      | 25     | 25     | 25     |

\*Figures in parentheses are percentages by column





interviewed. Within each research period some variations occurred between the equipment distribution of all campers and those campers who were interviewed. Not all factors could be accounted for when it was determined which campers to interview, especially since most of the overall camper characteristics were not available during the time of interview respondent collection. The distribution of the interviewed campers' residences on the other hand was very close to the distribution of residences for all the campers present in the campgrounds during the thirty research days (compare Tables 13 and 30). The percentage of Albertans interviewed was slightly low compared to the overall number of Albertans present while campers from foreign countries were over-represented in the interview sample. This, however, may be due to the fact that the determination of a camper from a foreign country was difficult as license plates were used as indicators of residence, which gives a very wrong impression if the vehicle was rented, borrowed, or bought just for a vacation. This is why respondents from foreign countries are in greater number than the total number of foreign campers indicated by the total camper count. Obviously there were more campers from foreign countries than was estimated in the camper count. Among the various research periods it was the second trip to Rocky River where interviewed campers differed substantially from the actual distribution of camper residences. Too few Albertans were interviewed while too many



TABLE 30

## RESIDENCE AREAS OF INTERVIEWED CAMPERS

| Area of Residence     | <u>Whole</u> | <u>K-1</u> | <u>K-2</u> | <u>R-1</u> | <u>R-2</u> | <u>J-1</u> | <u>J-2</u> |
|-----------------------|--------------|------------|------------|------------|------------|------------|------------|
| Alberta               | 43 (28.7) *  | 5 (20)     | 3 (12)     | 15 (60)    | 9 (36)     | 4 (16)     | 7 (28)     |
| British Columbia      | 12 ( 8.0)    | 3 (12)     | 2 ( 8)     | 2 ( 8)     | 2 ( 8)     | 1 ( 4)     | 2 ( 8)     |
| Prairie Canada        | 12 ( 8.0)    | 3 (12)     | 1 ( 4)     | 2 ( 8)     | 5 (20)     | 1 ( 4)     | 1 ( 4)     |
| Eastern Canada        | 18 (12.0)    | 3 (12)     | 7 (28)     | 2 ( 8)     | 4 (16)     | 1 ( 4)     | 1 ( 4)     |
| Western United States | 36 (24.0)    | 7 (28)     | 5 (20)     | 1 ( 4)     | 3 (12)     | 11 (44)    | 9 (36)     |
| Eastern United States | 23 (15.3)    | 3 (12)     | 7 (28)     | 3 (12)     | 2 ( 8)     | 6 (24)     | 2 ( 8)     |
| Foreign               | 5 ( 3.3)     | 1 ( 4)     |            |            |            | 1 ( 4)     | 3 (12)     |

\*Figures in parentheses are percentages by columns.



residents from Manitoba, Saskatchewan, Ontario, Quebec, and the eastern United States were interviewed, which was not an attempt to correct for any imbalance, but was accidental.

Basically it was felt that the characteristics of the interviewed campers were similar in most respects to those of the population from which the sample was taken for although some variations did occur it was felt that they were not great enough to radically affect the representativeness of the sample. Before proceeding on with a discussion of the attitude and opinion questions two further pieces of data should be presented. The interview respondents were asked if they had camped in a Canadian National Park before (see Table 31). (Some confusion arose concerning the meaning of the word "before" as to whether this meant before the camper's trip or before the camper's stay in the particular campground and this basic flaw could not be rectified in time for the total sample so the meaning was largely left up to the discretion of the respondent.) Over half of all those interviewed had camped in a Canadian National Parks before (usually taken to mean before the particular trip).

TABLE 31

HAVE YOU CAMPED IN A CANADIAN NATIONAL PARK BEFORE?

| <u>Answer</u> | <u>Whole</u> | <u>K-1</u> | <u>K-2</u> | <u>R-1</u> | <u>R-2</u> | <u>J-1</u> | <u>J-2</u> |
|---------------|--------------|------------|------------|------------|------------|------------|------------|
| Yes           | 85 (56.7) *  | 16 (64)    | 14 (56)    | 17 (68)    | 14 (56)    | 11 (44)    | 13 (52)    |
| No            | 65 (43.3)    | 9 (36)     | 11 (44)    | 8 (32)     | 11 (44)    | 14 (56)    | 12 (48)    |

\*Figures in parentheses are percentages by columns



Both Mt. Kerkeslin and Rocky River both had higher percentages of campers who had camped in a Canadian National Park before (especially in Rocky River during the holiday weekend) while fewer campers from Jonas Creek had done so. When the respondents were asked if they had camped in the same campground before about 14% of all the interviewed campers replied that they had. About 20% of the campers at Rocky River over the holiday weekend had camped there before, but surprisingly enough the largest percentages of those who had camped in the same campground before were from Jonas Creek, which may be related to either its proximity to the Columbia Icefields or a satisfactory previous experience in Jonas Creek campground. It seemed that a number of campers in Jonas Creek remembered their previous stay there and planned their stop at the same campground from their previous experience.

When campers were asked what type of a campground they usually selected about 70% responded the undeveloped automobile campground and 22% said the developed and serviced campground (see Table 32). Most campers in Mt. Kerkeslin indicated that they usually selected the undeveloped automobile campground while in Rocky River the number was less as more indicated a tendency to select the developed and serviced campground. About 36% of the campers at Jonas Creek indicated that they usually selected the developed and service campground which may be due to either the large proportion of United States residents or the large number of recreation





TABLE 32

## CAMPERS' SELECTED AND PREFERRED TYPE OF CAMPGROUND

|                                               | Type of Campground<br>usually selected | Type of Campground<br>preferred |
|-----------------------------------------------|----------------------------------------|---------------------------------|
| Remote                                        | 4 ( 2.7)                               | 11 ( 7.3)                       |
| Undeveloped Automobile                        | 105 (70.0)                             | 95 (63.3)                       |
| Developed Automobile                          | 33 (22.0)                              | 36 (24.0)                       |
| Undeveloped & developed<br>automobile equally | 5 ( 3.3)                               | 5 ( 3.3)                        |
| Off the road no campground                    | 1 ( 0.6)                               | 1 ( 0.6)                        |
| Don't Know                                    | 1 ( 0.6)                               | 0                               |
| No Response                                   | 1 ( 0.6)                               | 2 ( 1.3)                        |
|                                               | <u>150 (100.0)</u>                     | <u>150 (99.8) *</u>             |

\* Percentages may not total 100% due to rounding

vehicles which could utilize the more sophisticated facilities available at the serviced campground. When respondents were asked which campground types they preferred to camp in some of those who usually selected the undeveloped automobile campgrounds indicated that they preferred either a remote campground (especially campers from the first research period at Mt. Kerkeslin) or a developed and serviced campground (as did many campers during the second research period at Rocky River and both periods at Jonas Creek). Most campers indicated that the type of campground they usually selected was also the type they preferred (i.e. most campers who usually selected undeveloped campgrounds did so because they preferred them). In general the campers at Mt. Kerkeslin revealed greater preference for the undeveloped campground than did the campers at the other two campgrounds. By comparing tables 3 and 32 it can be seen that about 65% of the campers



who camp in undeveloped and developed campgrounds do so because they prefer them, but some campers prefer other campground types from the ones in which they were interviewed. At this time it is not known how a camper's campground preference relates to depreciative behavior in these campgrounds, but the relationships of preference, satisfaction, and treatment may be further avenues of interesting research into depreciative behavior.

### Camper Opinions

Basically two types of questions were asked in the camper interview, those that dealt with opinions and those that were series questions concerned with attitude measurement. Sawyer and Harbaugh (1970) make the distinction between questions which test the beliefs and opinions of an individual and those which test his attitudes. They note that an opinion is free from the emotional, feeling, or affective component that characterizes an attitude and that questions dealing with opinions cannot be placed together to form an assessment of an attitude, but often deal with factual statements regarding the beliefs of the individual. Questions which attempt to measure attitudes can often be placed together to form a scale.

Attitude scales . . . . typically yield a total score indicating both a direction and intensity of an individual's feelings, thoughts and predispositions to act toward a given concept. Further in the construction of an attitude scale, the different statements are designed to measure a single attitude or unidimensional scale (Sawyer and Harbaugh, 1970:401).



By interviewing the camper an attempt was made to gain insight into attitudes towards depreciative behavior as well as assess some opinions which may or may not be related to depreciative behavior.

In order to shed some light on the reasons why the interviewed campers chose camping as a recreational activity each respondent was asked why he liked to camp. As each camper was allowed to give up to three reasons there was not a great deal that could be done with this information other than tabulate the number of times each reason was mentioned (see Appendix VIII, Table 33 for the full listings). The four primary reasons mentioned for liking to camp were: 1) contact with nature, liking the outdoors, fresh air, 2) getting away from the city, 3) it is an economical activity, and 4) getting away from the routine of daily life. The first two reasons were mentioned a total of 105 times while the last two were mentioned a total of fifty-two times. Getting away from the city and routine of daily life were mentioned more frequently in Rocky River and the least at Jonas Creek. The getting away from daily life aspect of camping seems more important to those campers on weekend trips from metropolitan areas than for those on vacations. In five of the research periods contact with nature or enjoyment of the outdoors was the primary reason given for liking to camp, the only exception was during the holiday weekend at Rocky River where the reason mentioned most frequently was getting away from the city.





The actual choice of a specific campground is often not the product of deep deliberation. When the respondents were asked why they selected the specific campground in which they were staying they often mentioned that it happened to be in the right place when they decided to stop travelling or they saw it from the road and pulled in and stayed (see Appendix VIII, Table 34). A few campers had previous knowledge of the campgrounds and some had heard about them from friends, relative or other campers. Some campers were forced to stay where they did because other campgrounds were either full, not open, or they thought that other campgrounds ahead would be full. These types of reasons were mentioned a total of forty-five times and other than the exception noted below were not mentioned as a primary factor in the selection of the three campgrounds during the peak camping season. During the first research period at Mt. Kerkeslin very few campgrounds were open in Jasper National Park and consequently the primary reason campers there gave for selecting a campground was that they selected the first one which was open. The primary reason given during the rest of the research periods was that the camper had seen the campground on a park service or road map or saw it in the Alberta Traveller's Guide. Most of the campgrounds were selected because they were in the right place at the right time and they were not selected primarily on the basis of a predetermined choice. Campers who used maps or guides usually indicated that they selected an area and





then picked the campground from the road when the time was correct. It may be asked, do campers really select undeveloped automobile campgrounds because they are preferred or because they are in the right place at the right time and because they are the most predominant type of campground available in Jasper National Park? Some campers mentioned that they stayed in the campgrounds they did because they were small and quiet or because they liked the particular campground. Many campers did pull into these campgrounds during the afternoon, drove around the loop road and then left. Generally, however, campers started to come into the campground at about 3:00 p.m. and the flow would increase till about 6:00 p.m. when the campground would be nearly full. During the peak season of July and early August campers would still be driving in looking for sites from 6:00 p.m. till 10:00 p.m. even though the campground was full. The pattern does seem to point to unmeditated choice of the specific campground for most campers.

One group of questions in the interview dealt with some aspects of camper behavior and management which allowed for further probing if a certain response was given. For example when campers were asked if they felt safe while camping in Canadian National Parks 96.7% of them said they did feel safe. Of the five who said no, four were from the United States. The reasons given for not feeling safe were bears, theft, and bodily harm. Most campers (96.7%) also felt that their behavior should not be different in a national park



campground from that in campgrounds outside the national parks. Only four campers felt that they should take extra care of the flora and fauna of the park and one camper felt that people should be more considerate of other campers. In general, campers feel safe and that their camping behavior would not be any different from that elsewhere while camping in a Canadian National Park.

### Attendant Preferences

When campers were asked what type of campground attendant they preferred no clear response predominated. A little over a third preferred the mobile attendant while about a fourth preferred a permanent attendant (see Table 35).

TABLE 35

#### CAMPER PREFERENCES FOR TYPE OF CAMPGROUND ATTENDANT

| <u>Attendant<br/>Type</u>              | <u>Whole</u> | <u>K-1</u> | <u>K-2</u> | <u>R-1</u> | <u>R-2</u> | <u>J-1</u> | <u>J-2</u> |
|----------------------------------------|--------------|------------|------------|------------|------------|------------|------------|
| Mobile                                 | 53 (35.3) *  | 8 (32)     | 9 (36)     | 14 (56)    | 6 (24)     | 8 (32)     | 8 (32)     |
| Permanent                              | 40 (26.7)    | 6 (24)     | 8 (32)     | 5 (20)     | 8 (32)     | 3 (12)     | 10 (40)    |
| None                                   | 17 (11.3)    | 5 (20)     | 2 (8)      | 3 (12)     | 4 (16)     | 2 (8)      | 1 (4)      |
| Depends on<br>the camp-<br>ground size | 11 (7.3)     | 4 (16)     | 1 (4)      | 1 (4)      | 1 (4)      | 3 (12)     | 1 (4)      |
| No preference                          | 27 (18.8)    | 2 (8)      | 5 (20)     | 2 (8)      | 5 (20)     | 8 (32)     | 5 (20)     |
| Mobile or<br>Permanent                 | 2 (1.3)      | 0          | 0          | 0          | 1 (4)      | 1 (4)      | 0          |

\*Figures in parentheses are percentages by columns



About 11% preferred no attendant while 18% had no preference. Some campers felt that the type of attendant depended on the size of the campground while a few preferred some type of attendant but didn't specify. As might be expected no camper over fifty years of age said that he preferred no attendant and as a whole about 63% of those interviewed said that they did prefer an attendant of some sort. Mt. Kerkeslin had the largest proportion of those preferring a remote campground and the largest proportion of campers responding that they preferred no attendant. One finding which is difficult to explain was that the second research trip in each campground had larger proportions of campers preferring permanent attendants. This may have been related with a time factor or the possibility that more campers had heard of or encountered more behavior problems as the season progressed. Women seemed to be more willing to accept the status quo or express no preference, while a greater proportion of men expressed preferences for either no attendant or a permanent one. This finding does not support the idea that women prefer greater supervision than men. Women, however, may not express themselves as freely or hold strong convictions on this point. The type of equipment which a camper owns did not appear to affect this response too greatly, although out of the twenty campers who owned trailers nineteen said that they preferred some kind of an attendant which might indicate that those campers with expensive recreational equipment are more concerned about possible campground problems, but this finding could be related





to the age of the individuals owning trailers, the residence of the trailer owners, or the type of people prone to buying trailers. Although no one factor accounts for a large part of the various attendant preferences it appears that a combination of age, sex, type of equipment, campground preference and time of the year affect the camper's response. The only clear finding was that the campers in these three campgrounds did not overwhelmingly prefer permanent attendants in the campgrounds they select.

### Camper Responsibility

About three-fourths of the interviewed campers felt that it was their responsibility to help control the behavior of other campers only in severe circumstances. A few campers felt it was never their responsibility while 16% felt it was always their responsibility (see Table 36). Of the "Always" responses 62.5% of these came from Mt. Kerkeslin, 25% from Jonas Creek and 12.5% from Rocky River. A greater proportion of campers in Rocky River felt that it was their responsibility to help control the behavior of other campers only in severe circumstances. One factor which was significantly linked to these responses was that of age (see Table 37). It was found that campers in the young age groups (21-30 years) and the old age groups (61 + years) gave the response "always" in greater proportions than their distribution within the sample. The three age groups between 31-60 years of age accounted for 52.4% of the sample and 64.3% of the "never"





TABLE 36

CAMPER OPINIONS ON THEIR RESPONSIBILITY TO HELP CONTROL  
THE BEHAVIOR OF OTHER CAMPERS

| <u>Responses</u>                | <u>Whole</u> | <u>K-1</u> | <u>K-2</u> | <u>R-1</u> | <u>R-2</u> | <u>J-1</u> | <u>J-2</u> |
|---------------------------------|--------------|------------|------------|------------|------------|------------|------------|
| Never                           | 14(9.3)*     | 0          | 3(12)      | 4(16)      | 1( 4)      | 4(16)      | 2( 8)      |
| Only in Severe<br>circumstances | 111(74.0)    | 18(72)     | 14(56)     | 20(80)     | 22(88)     | 18(72)     | 19(76)     |
| Always                          | 24(16.0)     | 7(28)      | 8(32)      | 1( 4)      | 2( 8)      | 3(12)      | 3(12)      |
| No Response                     | 1( 0.7)      | 0          | 0          | 0          | 0          | 0          | 1( 4)      |

\*Figures in parentheses are percentages by columns

responses. Those campers in the middle age brackets and family

TABLE 37

PERCENTAGE OF THOSE IN EACH AGE GROUP RESPONDING "NEVER" OR  
"ONLY IN SEVERE CIRCUMSTANCES" IN QUESTION SIXTEEN  
OF THE CAMPER INTERVIEW

| <u>18-20</u> | <u>21-30</u> | <u>31-40</u> | <u>41-50</u> | <u>51-60</u> | <u>61+</u> |
|--------------|--------------|--------------|--------------|--------------|------------|
| 50%(2)*      | 76.3%(59)    | 92.4%(39)    | 94.1%(34)    | 85.8%(7)     | 55.5%(9)   |

\*Figures in parentheses are the total number of individuals in each age group

groups seem reluctant to exercise responsibility for the behavior of other campers, the younger and older campers were more willing to voice an opinion that it is always their responsibility to help control the behavior of other campers.

Two other factors which had some effect on a camper's feelings of responsibility were sex and residence. The sex factor was not of great importance, but it was interesting



that of those who responded "never" to question sixteen (fourteen people) on the camper interview 64.3% were women who only made up 48% of the sample. From this it appears that a greater proportion of women campers do not wish to place themselves in authority positions. Previously it was mentioned that distance was a factor which affected the proportion of depreciative acts which a camper committed. Albertans, who made up 28.7% of the interview sample, accounted for 42.9% of the "never" responses while those campers from the eastern United States (15.3% of the sample) made up 29.2% of the "always" responses and 7.1% of the "never" responses. Together the United States residents made up 39.3% of the sample, but accounted for 54.2% of the "always" responses. There appears to be some slight indication that campers from further residence areas seem more willing to express greater responsibility in helping to control the behavior of their fellow campers. Here again, a combination of factors are related to question responses. Responsibility seems to be most affected by the age and sex of the respondent with some relationship to distance of the camper's residence from the park.

#### Camper Opinions Towards Depreciative Behavior Problems in Undeveloped Campgrounds

When campers were asked (question eleven) if they felt campgrounds such as the one they were staying in had any problems with camper behavior 87.3% of them responded that they



did not feel that there were any problems. This finding is similar to that of Clark, Hendee, and Campbell (1971a), found that campers in developed automobile campgrounds did not feel that the problems with camper behavior were serious. Here again a factor of distance appears to be related to the opinions of campground behavior problems. With the exception of British Columbia residents the proportion of those feeling that there were problems increased with distance from the park (see Table 38). Another factor that appears to

TABLE 38

## CAMPER RESPONSES TO QUESTION ELEVEN BY RESIDENCE AREA

| Response | Alberta   | British<br>Columbia | Prairie  | North<br>Canada | Western<br>United<br>States | Eastern<br>Canada | Eastern<br>United<br>States |
|----------|-----------|---------------------|----------|-----------------|-----------------------------|-------------------|-----------------------------|
| yes      | 3 ( 7.0)  | 3 (25.0)            | 0        | 0               | 3 (8.3)                     | 2 (11.1)          | 6 (26.1)                    |
| no       | 40 (93.0) | 8 (66.7)            | 12 (100) | 1 (100)         | 33 (91.7)                   | 16 (88.9)         | 17 (73.9)                   |
| Totals   | 43        | 11 (91.7)*          | 12       | 1               | 36                          | 18                | 23                          |

\*Percentage does not equal 100 percent due to non response

have a relationship with this response is the number of days the respondent usually camped per year. As the individual camped more days the more he seemed to feel that there were problems in these campgrounds (see Table 39).

TABLE 39

PERCENTAGE OF THOSE RESPONDING THAT THERE WERE PROBLEMS  
WITH CAMPER BEHAVIOR BY THE AVERAGE NUMBER OF  
DAYS CAMPED PER YEAR

| 1-7 | 8-14 | 15-21 | 22-30 | 31-50 | 50-100 | 100+ |
|-----|------|-------|-------|-------|--------|------|
| 7.4 | 11.9 | 3.8   | 10.3  | 17.6  | 42.9   | 50   |





This relationship is fairly weak due to the small number of campers interviewed who camped more than an average of fifty days per year, but it could not be expected that one would find many campers in any one campground who camp that many days per year.

The types of problems which were mentioned by those who felt that there were problems with camper behavior were largely centered on: 1) noise problems, 2) littering, 3) damage to the natural environment, or 4) loose pets in the campground. Thirty-three mentions were made of various problems (see Appendix VIII, Table 40) of which twenty-six concerned the above four problems. As a group it was social problems which received the most mentions from campers.

In general most interviewed campers in the three undeveloped campgrounds felt that there were no serious problems with camper behavior. There was some indication that as distance from Jasper National Park increased and the average number of days an individual camped per year increased a greater proportion of campers felt that there were problems with camper behavior, especially those problems involving noise, pets, littering, and environmental damage.

#### Camper Opinions Towards Management Changes

Similar relationships to those above were found when campers were asked if they could suggest any management changes that would affect other campers' behavior which they





would like to see in the campground that they were staying. A little over one-fourth of the respondents indicated that they could suggest management changes (see Table 41). This percentage figure varied between the three campgrounds and it was found that of the three, campers had less to suggest in Jonas Creek although the lowest number of campers suggesting management changes came from the second research

TABLE 41

POSITIVE AND NEGATIVE RESPONSES TO MANAGEMENT CHANGES  
QUESTION SEVENTEEN IN THE CAMPER INTERVIEW

| <u>Response</u> | <u>Whole</u> | <u>K-1</u> | <u>K-2</u> | <u>R-1</u> | <u>R-2</u> | <u>J-1</u> | <u>J-2</u> |
|-----------------|--------------|------------|------------|------------|------------|------------|------------|
| yes             | 41(27.3)     | 8(32)      | 9(36)      | 9(36)      | 4(16)      | 5(20)      | 6(24)      |
| no              | 109(72.7)    | 17(68)     | 16(64)     | 16(64)     | 21(84)     | 20(80)     | 19(76)     |

period at Rocky River. More males than females had suggestions as about 33.3% of all the males made suggestions while only 20.8% of all the females did so. Here again distance seemed to play some function as the proportions of those making comments increased with distance. Although a fairly high

TABLE 42

PERCENTAGE OF CAMPERS FROM EACH RESIDENCE AREA MAKING  
MANAGEMENT CHANGE SUGGESTIONS

| <u>Alberta</u> | <u>British<br/>Columbia</u> | <u>Prairie</u> | <u>Western<br/>United<br/>States</u> | <u>Eastern<br/>Canada</u> | <u>Eastern<br/>United<br/>States</u> | <u>Foreign</u> |
|----------------|-----------------------------|----------------|--------------------------------------|---------------------------|--------------------------------------|----------------|
| 20.9           | 25.0                        | 16.7           | 30.6                                 | 33.3                      | 39.1                                 | 20             |

proportion of residents from the western United States made



suggestions, campers from the eastern half of the United States and Canada had the highest proportion feeling that they could make suggestions for management changes.

Various management changes were mentioned fifty times and of these, four suggestions were mentioned twenty-seven times. These four management changes were: 1) permanent staff in the campgrounds, 2) having more space between the sites, 3) more screening vegetation to separate the sites from each other, and 4) stricter enforcement of the rules and regulations. Other suggestions involved more warden and police patrolling, separate areas of the campground for tents and trailers, more post and log barriers, places for waste disposal, and better methods of marking site occupancy (see Appendix VIII, Table 43). The two suggestions dealing with site spacing and screening vegetation received eleven mentions, eight of which came from Rocky River which did have a problem with site distinction.

Although many of those interviewed did make suggestions for management changes which would affect camper behavior the majority of campers could not suggest any management changes that they would like to see. This proportion of those who did not suggest changes appeared to decrease with residence distance from Jasper National Park. More males made suggestions than females which again indicates that females are more satisfied with the status quo or are less efficient at verbalizing themselves.



Before proceeding on with the attitude question results it might be well to note that the campers interviewed in the three campgrounds did not seem to hold opinions which revealed that they were aware of behavior problems in the campground or of the depreciative behavior which was taking place around them. Most campers expressed satisfaction with the campgrounds in which they were staying. These opinions may have been different if they had stayed within the campground for longer periods of time, however, as most interviewed campers were transient in nature it appears that they were satisfied with the conditions they encountered and do not feel that camper behavior is a serious problem in campgrounds in Mt. Kerkeslin, Rocky River, and Jonas Creek. One last point, concerning involvement, was that most campers adhere to a norm of non-involvement as do campers in the developed and serviced campgrounds, unless the circumstances were considered severe. In many respects the undeveloped campground camper expresses similar opinions to those campers in the serviced campgrounds.

#### Camper Knowledge of Rules, Regulations, and Laws

Before the camper was introduced to the situational series of items which made up the attitude questions he was asked what he thought were two or three of the most important rules that a camper should follow when camping in any campground. This was done as a check to make sure that all important rules and regulations were covered in the attitude





questions and to determine what the respondent felt were important camping rules. A total of twenty-one rules were mentioned 332 times (see Appendix VIII, Table 44). Of these rules five of them were mentioned 284 times. Most of the

TABLE 45

## TOP FIVE RULES MENTIONED BY CAMPERS

| <u>Rules</u>                                     | <u>Times Mentioned</u> |
|--------------------------------------------------|------------------------|
| 1. Keeping the campground clean                  | 109                    |
| 2. Consideration for the rights of other campers | 57                     |
| 3. Safety with fires                             | 51                     |
| 4. Being quiet while camping                     | 47                     |
| 5. Not damaging the natural environment          | <u>20</u>              |
| Totals                                           | 284                    |

other rules which were mentioned primarily elaborated on the first five. Clearly not littering was the number one rule which the campers felt was important. Fire safety ranked highly, as did the consideration of other campers. If rules two and four which both could be considered social rules are put together they constituted almost as many of the mentions as cleanliness. The natural environment did not rank nearly as highly as the other four rules, although rules concerning the natural environment were mentioned a total of twenty-eight times. The three most important rules which campers mentioned were cleanliness, respect for other campers, and fire safety.





In order to test the basic knowledge of the camper concerning basic camping rules the interview respondents were shown six pictures and were asked to indicate whether they thought any Canadian National Park rules, regulations, or laws were being violated in the activities shown in the pictures (see Appendix VI for the pictures). Of these six pictures only four of them illustrated actual rule violations. The various pictures illustrated the following:

- Picture 1 - a man enticing a bear with food so that he can take its picture (illegal),
- Picture 2 - a man chopping wood
- Picture 3 - a woman placing a nail in a tree so that she could erect a clothesline on which to hang her wash (illegal)
- Picture 4 - a youth removing a park "nature trail" sign (illegal)
- Picture 5 - a family roasting marshmallows over a concrete and steel fire place,
- Picture 6 - two dogs off leashes eating garbage from overturned cans (illegal).

The interview respondent was given three response categories consisting of the positive and negative categories as well as a do not know option. Most campers were able to identify the illegal activities correctly (see Table 46). Picture one gave some respondents problems as it was not often clear to them exactly what the man was trying to do, however, the majority realized that feeding bears was illegal in the park. Although picture three received the least number of correct answers many people indicated that they did not know if it was against Canadian national park rules to place nails in trees. The picture depicting the dogs off leashes received



TABLE 46  
CAMPER RESPONSES TO INTERVIEW PICTURE SERIES

| <u>Picture</u> | <u>Yes</u> | <u>No</u> | <u>Don't Know</u> | <u>Total</u> |
|----------------|------------|-----------|-------------------|--------------|
| 1*             | 131(87.3)  | 13( 8.7)  | 6( 4.0)           | 150          |
| 2              | 3( 2.0)    | 138(92.0) | 9( 6.0)           | 150          |
| 3*             | 123(82.0)  | 9( 6.0)   | 18(12.0)          | 150          |
| 4*             | 148(98.7)  | 2( 2.3)   | 0                 | 150          |
| 5              | 1( 0.7)    | 140(93.3) | 9( 6.0)           | 150          |
| 6*             | 124(82.7)  | 14( 9.3)  | 11( 8.0)          | 149          |

\*These were pictures in which illegal activities were taking place

the largest number of "no" and "don't know" responses. Some problems did develop with the use of these pictures which involved biasing the respondent. When a camper consented to the request for an interview he was informed that other members of the party should not be consulted when responding to the various questions. In some cases other members of the party (particularly a wife or husband) insisted on making comments while the pictures were being shown. Some bias must be assumed in this data as repeated requests to the respondent's party did tend to cause some ill feelings, therefore requests for noninterference were made only a maximum of three times.

A total "right" score was constructed for each camper by giving him one point for each correct response to each picture so that a total of six was the highest score (see Table 47). Over half of the respondents had all the pictures correct for a score of six while 88% of all respondents had



TABLE 47  
DISTRIBUTION OF CAMPERS' RIGHT SCORES

---

| <u>Right<br/>Score</u> | <u>Whole</u> | <u>K-1</u> | <u>K-2</u> | <u>R-1</u> | <u>R-2</u> | <u>J-1</u> | <u>J-2</u> |
|------------------------|--------------|------------|------------|------------|------------|------------|------------|
| 1                      | 2 ( 1.3)     | 0          | 1 ( 4)     | 0          | 0          | 0          | 1 ( 4)     |
| 3                      | 3 ( 2.0)     | 0          | 1 ( 4)     | 1 ( 4)     | 1 ( 4)     | 0          | 0          |
| 4                      | 13 ( 8.7)    | 2 ( 8)     | 3 (12)     | 2 ( 8)     | 3 (12)     | 1 ( 4)     | 2 ( 8)     |
| 5                      | 51 (34.0)    | 7 (28)     | 4 (16)     | 7 (28)     | 11 (44)    | 10 (40)    | 12 (48)    |
| 6                      | 81 (54.0)    | 16 (64)    | 16 (64)    | 15 (60)    | 10 (40)    | 14 (56)    | 10 (40)    |

---

either a score of five or six. The range of scores did vary between the three campgrounds. Jonas Creek campers had fairly uniform high scores as did campers during the first research period at Mt. Kerkeslin, but the proportion of campers at Jonas Creek and the second research period at Rocky River having all six pictures correct was less than the proportion having six scores in the other research periods. The distribution of right scores clearly indicated that most of the interviewed campers (or in some cases the camper's party) were aware of the basic rules which applied in a Canadian national park campground.

One factor which seemed to be related to the right scores was that of age. There was some indication that respondents from the older age brackets attained proportionately higher scores than those in the younger age brackets. The strength of this statement increased when only females were considered. Such a finding would make sense as those who are older tended to have had proportionately greater





camping experience than the middle aged and younger campers, consequently older campers may have had greater exposure to the rules and regulations which apply in Canadian national park campgrounds.

The rule postings during the second research period in each campground did not appear to have a substantial effect on the degree of rule knowledge which campers exhibited on the interview questions. Some campers mentioned the fact that they had seen the rules posted in the pit privies, but very few indicated that they had actually read them. It was a flaw in the interview construction that no question was asked concerning these rule postings during the second research periods. On the rule postings two of the illegal activities shown in the six pictures (one and six) were specifically mentioned as being against park rules. During the second research periods in Mt. Kerkeslin and Jonas Creek slightly more campers identified the man having food near a bear as being illegal. However, in all three campgrounds during the second research period less campers identified dogs off leashes as being an illegal activity. From these results it appears that the effects of rule postings are rather minimal.

#### Camper Attitudes Towards Depreciative Behavior

Similar to the series of pictures used above to test the campers' knowledge of regulations and rules, series of hypothetical situations involving various types of depreciative behavior were used to test the three components of an attitude.





Not all the situations used in these questions involved depreciative behavior in order to avoid a set response, but most of the items were concerned with problem behavior. All three sets of items designed to test the three earlier defined components of an attitude were pretested in a campground in Jasper National Park prior to the beginning of the regular camping season. The findings from these questions throw some light on the attitudes held by the campers in the three undeveloped automobile campgrounds under study.

#### Affective Component of Camper Attitudes

The affective component of an attitude consists of those feelings of like or dislike concerning some class of stimuli, in this case the depreciative behavior of other campers. In order to gain some understanding of this aspect of an attitude a series of items was devised which were read to the interview respondent. He would indicate whether or not any of the items were activities which would bother him in a campground in which he was camping (see Appendix V, Question 7). The set of items consisted of eight situations, seven of which were considered depreciative behavior (two legalistic acts, three nuisance, one vandalistic, and one camper etiquette act). Five of the items in the scale consistently received the same responses while three of them indicated that many campers did not agree with each other (see Table 48).



TABLE 48

CAMPER RESPONSES TO BOTHER ITEMS IN QUESTION  
SEVEN OF INTERVIEW

| <u>Items</u>                                                                    | <u>Responses</u> |            |
|---------------------------------------------------------------------------------|------------------|------------|
|                                                                                 | <u>Yes</u>       | <u>No</u>  |
| a) unburned litter in the fireplace of your newly selected campsite             | 81 (54.0)        | 67 (44.7)  |
| b) children catching small squirrels to take home                               | 133 (88.7)       | 16 (10.7)  |
| c) a person listening to a moderately loud radio in his campsite near you       | 71 (47.3)        | 77 (51.3)  |
| d) a vehicle parked off designated areas due to crowding                        | 35 (23.0)        | 111 (74.0) |
| e) a group of children running through your campsite                            | 60 (40.0)        | 89 (59.3)  |
| f) a man taking chopped firewood from other people's sites while they are away  | 144 (96.0)       | 6 ( 4.0)   |
| g) a loud gathering at a campsite near you going until 1:00 a.m. in the morning | 115 (76.7)       | 35 (23.3)  |
| h) a group of children playing ball in an empty site                            | 5 ( 3.3)         | 144 (96.0) |

Only two items in the above list received response differences between the three campgrounds. Campers in Mt. Kerkeslin seemed more sensitive to the first item and greater proportions of those interviewed indicated that garbage left in their fireplace would bother them. The responses to item "e" revealed the magnitude of site spacing problems between the three campgrounds. About 54% of those interviewed in Rocky River said that children running through their site would bother them while 40% of the campers at Mt. Kerkeslin and 26% at Jonas Creek said that this would bother them. The problems of site spacing are greatest at Rocky River and the



least at Jonas Creek which could have influenced the camper's response to this item.

As noted above, various items received similar responses from the campers while some did not. One item on which the respondents did not agree was finding litter in the fireplace of a newly selected campsite. A little more than half of the campers indicated that this would bother them, however, those who said it would not bother them often clarified their response by noting that burnable litter was acceptable while objects such as bottles and cans would bother them (see Figure 44). Most of those interviewed agreed that catching squirrels to take home would bother them. The two items referring to campground noise received varying responses. About half of the campers felt that they would not be bothered by a moderately loud radio in the campsite near them. This finding would support the idea that certain degrees of crowding do not bother many individual campers. The tolerance of radios does appear to decrease as the number of years an individual has camped increases. When the noise element was increased and specified to have occurred later at night then the tolerance decreased as about three-fourths of the interview respondents felt that a loud gathering in a campsite near them going until 1:00 a.m. in the morning would bother them. This activity was found to bother proportionately more campers in the older age brackets. Most campers were not bothered by children playing ball in an empty site, but if the children were running through their







Figure 44. Unburnable litter left by a camper in Mt. Kerkeslin campground.



Figure 45. Improvised sites and illegal campers during the peak camping season at Mt. Kerkeslin.





site then a greater number of them were bothered. About 40% of the respondents were bothered by this latter item while only 3.3% were bothered by the former. When asked if seeing another man taking chopped wood from another camper's site would be objectionable nearly all of the interviewed campers indicated that it would. A serious problem in many of the undeveloped campgrounds in Jasper National Park was campers who parked their vehicles off the asphalt or gravel areas provided for them (see Figure 45). When campers were asked if seeing a vehicle parked off designated areas due to crowding would bother them about three-fourths of them indicated that it would not bother them. Many campers seemed to feel that campers on the road had to have a place to stay for the night even if the campground was already full.

All positive answers that an individual camper gave to each item discussed above were added up to compose a rudimentary bother score. The scores ranged from one (only one activity bothered the respondent) to eight (respondent was bothered by all eight of the activities). The range of scores indicated that there was wide variation between individual camper's scores, as did the standard deviation figure (see Table 49). The average number of items which bothered the campers was between four and five or about half of the items. Mt. Kerkeslin campers had slightly higher mean bother scores while only one camper at Rocky River had a score over six. A fairly wide range of scores was exhibited



TABLE 49  
RANGE OF CAMPERS' BOTHER SCORES

| <u>Bother<br/>Score</u>    | <u>Whole</u> | <u>K-1</u> | <u>K-2</u> | <u>R-1</u> | <u>R-2</u> | <u>J-1</u> | <u>J-2</u> |
|----------------------------|--------------|------------|------------|------------|------------|------------|------------|
| 1                          | 3 ( 2.0)     | 0          | 0          | 1 ( 4)     | 0          | 1 ( 4)     | 1 ( 4)     |
| 2                          | 11 ( 7.3)    | 2 ( 8)     | 1 ( 4)     | 2 ( 8)     | 3 (12)     | 2 ( 8)     | 1 ( 4)     |
| 3                          | 28 (18.7)    | 3 (12)     | 5 (20)     | 6 (24)     | 4 (16)     | 4 (16)     | 6 (24)     |
| 4                          | 41 (27.3)    | 7 (28)     | 7 (28)     | 7 (28)     | 5 (20)     | 8 (32)     | 7 (28)     |
| 5                          | 40 (26.7)    | 8 (32)     | 6 (24)     | 3 (12)     | 8 (32)     | 8 (32)     | 7 (28)     |
| 6                          | 20 (13.3)    | 3 (12)     | 5 (20)     | 6 (24)     | 4 (16)     | 1 ( 4)     | 1 ( 4)     |
| 7                          | 5 ( 3.3)     | 2 ( 8)     | 0          | 0          | 1 ( 4)     | 1 ( 4)     | 1 ( 4)     |
| 8                          | 2 ( 1.3)     | 0          | 1 ( 4)     | 0          | 0          | 0          | 1 ( 4)     |
| mean                       | 4.29         | 4.52       | 4.52       | 4.08       | 4.36       | 4.08       | 4.20       |
| standard<br>devia-<br>tion | 1.38         | 1.33       | 1.36       | 1.44       | 1.38       | 1.32       | 1.50       |

by campers at Jonas Creek. Basically it was felt that campers in the three campgrounds had very similar score distributions.

Due to the smallness of the sample size many cross tabulations of the bother score with other variables were not significant (chi-square values were not high enough). Often there was not enough data to fill enough of the cells in a cross tabulation table, consequently chi-square values were unreliable. One relationship which was of interest was that between the bother score and the campers area of origin (see Table 50). Here again the distance factor appeared to have relationship with the sensitivity of the camper. When only the percentages of each residence area having bother scores from six to eight are considered greater proportions of those campers from the eastern United States and Canada had these higher scores. However, when all bother scores



TABLE 50

## PERCENTAGES OF CAMPER BOTHER SCORES BY RESIDENCE AREAS

| <u>Residence Area</u> | <u>Bother Scores</u> |            |            |
|-----------------------|----------------------|------------|------------|
|                       | <u>0-3</u>           | <u>4-5</u> | <u>6-8</u> |
| Alberta               | 18.6                 | 69.8       | 11.6       |
| British Columbia      | 32.4                 | 58.3       | 8.3        |
| Prairie Canada        | 50.0                 | 33.3       | 16.7       |
| Western United States | 19.5                 | 63.9       | 15.7       |
| Eastern Canada        | 38.9                 | 38.9       | 22.2       |
| Eastern United States | 34.8                 | 30.4       | 34.7       |

from average and above (four to eight) are considered the larger proportions having these scores come from the residence areas closer to Jasper National Park (see Figure 46). The exception to this generality are campers from the prairie provinces of Canada (Saskatchewan and Manitoba). Half of the interviewed campers from the Prairie provinces received scores from one to three which indicates that many of them were not greatly bothered by the eight camper activities. Very low proportions of campers from Alberta and the western United States received bother scores from one to three while about a third of those campers from the eastern United States and Canada had low scores. The relationship between bother scores and residence area is not clear, but it seems that:

- 1) greater proportions of campers from greater distances had higher bother scores (six to eight),
- 2) campers from areas closer to Jasper National Park had a large proportion of average bother scores (four and five), and
- 3) those campers



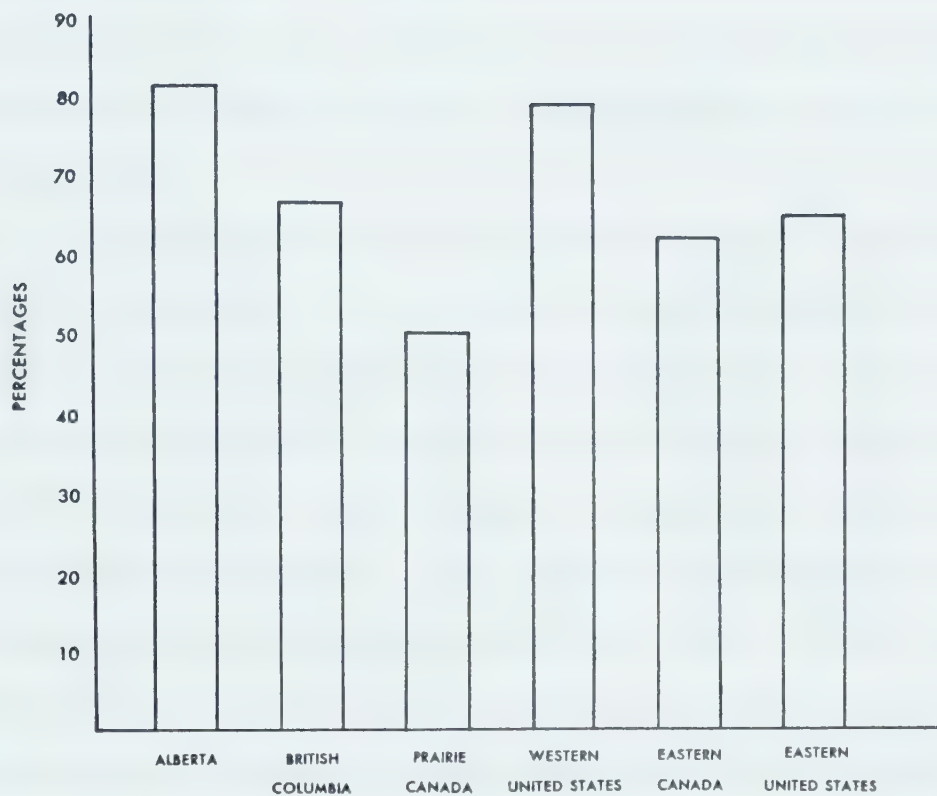


Figure 46. Percentage of campers by residence area receiving bother scores from four to eight.





from the eastern proportions of the United States and Canada exhibited less clustering about the average bother scores and tended to vary greatly between the high and low bother scores. It was felt that some significance must be attached to the finding that greater proportions of campers from residences further away from Jasper National Park did obtain bother scores above average as this does seem to indicate some degree of higher sensitivity to depreciative behavior on the part of those campers living further away from Jasper National Park.

In summarizing the results from this test of the affective component of attitudes towards depreciative behavior it may be said that the interviewed campers were not overly sensitive towards certain types of depreciative behavior, but that they did exhibit negative feelings towards some behavior problems. Some campers were bothered by two or three of the activities mentioned while others were bothered by all eight, but a majority of the campers found about half of the activities objectionable. Of the three activities which definitely bothered most campers two involved social situations (noise and camper etiquette) and one involved natural environment damage (children catching small squirrels).

#### Cognitive Component of Camper Attitudes

The cognitive component of an attitude consists of



the beliefs a person holds towards a stimulus or a class of stimuli. There are two types of beliefs, those in the existence of an object or stimulus and those concerned with the nature of the stimulus. An earlier discussion centered on the camper responses to legal and illegal activities in a series of pictures has already indicated the state of the campers' beliefs in the existence of certain basic campground regulations and rules. The set of hypothetical situations used in question nine of the camper interview attempted to assess the evaluative beliefs of the camper. Each respondent was asked to evaluate how suitable he thought each activity in a series of fourteen activities was in a campground such as the one in which he was currently staying. He was given a card which listed five response categories ranging from always right through neutral to always wrong. An average response for each item was constructed by giving each response a numeric value (one for always right through five for always wrong). All the numeric responses given to the individual items were totalled and then divided by the number of campers (usually 150) who responded to the item. Of the fourteen activities twelve of them constituted depreciative behavior and consisted of the following: a) four vandalistic acts against the natural environment, b) five legalistic of which four were campground rule violations and one was a liquor law infraction, c) two nuisance acts, one a health hazard and the other a pet violation, and d) one camper etiquette act dealing with taking chopped firewood from another site. Two



of the activities involved neutral or desirable behavior. The response to these various activities was fairly diverse (see Table 51).

Of the five legalistic activities a majority of those interviewed felt that becoming intoxicated and wandering around the campground and firing a gun at a scavenging bear were both activities which were always wrong. Responses were varied when campers were asked how suitable it was to vacate a campsite in the late afternoon. Although about half of the campers felt that leaving in the late afternoon was wrong, 20% were neutral and 28% felt that it was right although beliefs in this direction were not strong. The beliefs concerning this activity are fairly consistent with the behavior observed as many campers did not leave before the check-out time. Another legalistic activity which campers did not evaluate equally is that of sleeping in kitchen shelters. Almost two-thirds of the campers felt that this was wrong most of the time while only a few were neutral. None thought that this activity was right all of the time, but almost one-third felt that it was right in some cases. The item involving teaching children how to dig a firepit indicated that circumstances may have a great effect on how suitable a camper feels an activity is in a campground. It was assumed by many that the word teaching justified the activity and they were not careful in evaluating what followed the words teaching children. About 46% of those interviewed felt that this





TABLE 51

CAMPER RESPONSES TO THE APPROVAL/DISAPPROVAL ITEMS IN QUESTION NINE  
OF THE CAMPER INTERVIEW

| Act Descriptions<br><u>Legalistic Acts</u>                         | <u>Always<sup>1</sup><br/>Wrong</u> | <u>Wrong in<br/>some cases<sup>2</sup></u> | <u>Neutral<sup>3</sup></u> | <u>Right in<br/>some cases<sup>4</sup></u> | <u>Always<br/>Right</u> | <u>Average<br/>Response</u> |
|--------------------------------------------------------------------|-------------------------------------|--------------------------------------------|----------------------------|--------------------------------------------|-------------------------|-----------------------------|
| e) becoming intoxicated and wandering around the campground*       | 139(90.6)                           | 8( 5.3)                                    | 4( 2.8)                    | 2( 1.3)                                    | 0                       | 1.1                         |
| f) vacating a campsite in the late afternoon around 3:30 p.m.*     | 38(25.7)                            | 39(26.4)                                   | 29(19.6)                   | 35(23.7)                                   | 7( 4.7)                 | 2.6                         |
| j) firing a gun at a bear which is scavenging in the campground*   | 139(92.8)                           | 7( 4.7)                                    | 0                          | 3( 2.0)                                    | 1( 0.7)                 | 1.1                         |
| k) teaching children how to dig a fire pit and light a fire in it* | 38(25.5)                            | 8( 5.4)                                    | 5( 3.4)                    | 29(19.5)                                   | 69(46.3)                | 3.6                         |
| l) sleeping in a kitchen shelter overnight*                        | 68(45.6)                            | 23(15.4)                                   | 11( 7.4)                   | 47(31.5)                                   | 0                       | 2.2                         |
| Nuisance Acts                                                      |                                     |                                            |                            |                                            |                         |                             |
| h) leaving food supplies on the picnic table overnight*            | 131(78.3)                           | 13( 8.7)                                   | 2( 1.3)                    | 4( 2.7)                                    | 0                       | 1.2                         |
| i) letting a dog roam through the campground by himself*           | 134(89.3)                           | 11( 7.3)                                   | 2( 1.3)                    | 3( 2.0)                                    | 0                       | 1.2                         |
| Vandalistic Acts                                                   |                                     |                                            |                            |                                            |                         |                             |
| a) throwing used dishwater into nearby shrubs                      | 55(36.7)                            | 42(28.0)                                   | 29(18.7)                   | 24(16.0)                                   | 1( 0.7)                 | 2.2                         |
| b) picking a few leaves and flowers to take home*                  | 100(67.1)                           | 17(11.4)                                   | 12( 8.1)                   | 19(12.8)                                   | 1( 0.7)                 | 1.7                         |
| m) digging a trench around a tent site to drain off water*         | 28(18.7)                            | 19(12.7)                                   | 7( 4.7)                    | 64(42.7)                                   | 32(21.3)                | 3.4                         |
| n) draining waste from a trailer directly onto the ground nearby   | 125(83.3)                           | 13( 8.7)                                   | 4( 2.7)                    | 7( 4.7)                                    | 1( 0.7)                 | 1.3                         |

2.1 2





TABLE 51 Continued

| <u>Act Descriptions</u>                                                                                    | <u>Always<sup>1</sup><br/>Wrong</u> | <u>Wrong in<sup>2</sup><br/>some cases</u> | <u>Neutral<sup>3</sup></u> | <u>Right in<sup>4</sup><br/>some cases</u> | <u>Always<sup>5</sup><br/>Right</u> | <u>Average<br/>Response</u> |
|------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------|----------------------------|--------------------------------------------|-------------------------------------|-----------------------------|
| Camper Etiquette                                                                                           |                                     |                                            |                            |                                            |                                     |                             |
| d) taking chopped firewood from<br>an empty site                                                           | 32 (21.5)                           | 23 (15.4)                                  | 21 (14.1)                  | 52 (34.9)                                  | 21 (14.1)                           | 3.0                         |
| Neutral Acts                                                                                               |                                     |                                            |                            |                                            |                                     |                             |
| c) teaching children to stay away<br>from wild animals and only to<br>watch them                           | 0                                   | 0                                          | 3 ( 2.0)                   | 8 ( 5.3)                                   | 139 (92.7)                          | 4.9                         |
| g) putting out a fire that a<br>camper has left burning in<br>his site after he has left<br>the campground | 0                                   | 1 ( 0.7)                                   | 2 ( 1.4)                   | 15 (10.1)                                  | 130 (87.8)                          | 4.9                         |

\*These items made up the approval score



activity was always right and two-thirds indicated that teaching children how to dig a firepit in the campground was either always right or right in some cases. This item may have received a different response if it had been worded differently. Observations of illegal fires indicated that some campers do feel that this activity is legitimate, especially if they did not have access to a concrete and steel fireplace box. Although many campers listed fire safety as one of the most important rules to follow either the rules concerning fires were not known or were not felt to be of great importance in certain circumstances.

The two nuisance acts uniformly received responses which indicated that campers did not approve of them. Leaving food out on a picnic table overnight was recognized by most interviewed campers as a potentially dangerous thing to do which seems to be followed by appropriate behavior as few observations were made of this activity. The second nuisance act pointed out an inconsistency of camper behavior. Almost 90% of the respondents indicated that they felt letting a dog roam through the campground was always wrong, which agrees with the fairly high number of campers who correctly identified unleashed dogs as a violation of campground rules. This general knowledge and unfavorable attitude towards unleashed dogs held by a majority of the interviewed campers certainly does not appear to greatly affect the behavior of many campers with pets. Of the 124 nuisance acts observed 56% of



them were pet violations. This inconsistency became very clear as many campers who were interviewed had dogs which were not kept on leashes yet indicated knowledge of the rules concerning pets and felt that the activity was wrong.

Of the four vandalistic act situations two of them were not clearly depreciative behavior. Although about two-thirds of the campers felt that throwing dishwater into nearby shrubs was wrong others noted that they used biodegradable soap and that there were no provided facilities for the disposal of used dishwater. This latter point did not account for all the variance however, as disposal facilities were available Jonas Creek where the same amount of interview respondents noted that this activity was not always wrong. Throwing used dishwater into vegetation was a frequently observed activity and was recorded as depreciative behavior even though the damaging effects of this activity are not known. The same arguments can be applied to the draining of waste from a trailer onto the ground nearby. Often this waste only involved dishwater and occurred on gravel parking spur areas which were the least damaging place for such water to be placed. Most campers felt that this activity was always wrong or wrong in most of the time. Inconsistencies were observed here as trailer and motor home owners often either had hose connected to their drain pipes which was placed in nearby shrubs for outlet or placed in a drain bucket under the drain pipe which was emptied off in the bushes before leaving. Within Mt. Kerkeslin and Rocky





River there were no waste disposal sites available, although some campers used the pit toilets or dumped their waste water on the gravel where no vegetation was present. The rationale behind this behavior can only be guessed at, but it may be that some trailer owners wished to keep the refuse from their own immediate area and that the drain hose or pail was a short-term solution which ultimately involved depreciative behavior that the camper may or may not perceive. Although most campers (two-thirds) felt that picking leaves and flowers was always wrong many justified this if only a few were taken. The last vandalistic situation involved similar logic to that employed in the firepit example. About 64% of the respondents felt that digging a trench around a tent to drain off water was either always right or right in some cases. Only 20% of all the campers said that they thought the activity was always wrong. Some respondents felt that digging a trench was alright as long as it was refilled, however, from observation this was not often the case and trenches which were left often contributed to erosion, unesthetic sites, dust, and potential problems for the next individual attempting to set up a tent of a different size.

Nine of the above items definitely involved activities which violated Canadian National Park rules, regulations, or laws. Each response to these items was given a numerical value, one for always wrong through five for always right. Each individual's responses to these nine items were totalled into a score which was named the approval score. A person





who felt that all nine items in the scale were always wrong received the minimum low score of nine while a person who felt all the items were always right received the maximum high score of forty-five, the median or middle score in the range was 27.5. The actual range of scores ran from a low of nine to a high of thirty-three (see Figure 47). The distribution of scores was skewed to the left of a normal curve which revealed that a great many of the respondents did not highly approve of the nine depreciative activities. However, the possibility of interview bias is very strong in this instance as by the time the items on this scale were given to the respondent he was aware that it was mainly undesirable activities which were being tested and his responses to this behavior were being evaluated. The wording of the items or their selection may have been incorrect (by suggesting a negative response), or the nature of the topic itself too sensitive. However, seven of the activities involved behavior which was observed more than once during the thirty days and often were committed by interview respondents.

The average approval score was about eighteen which could be placed halfway between always wrong and neutral. The three campgrounds did not have campers which exhibited radically different scoring patterns. The lowest average of about seventeen occurred at Mt. Kerkeslin on the second trip and the highest average of nineteen and a half occurred



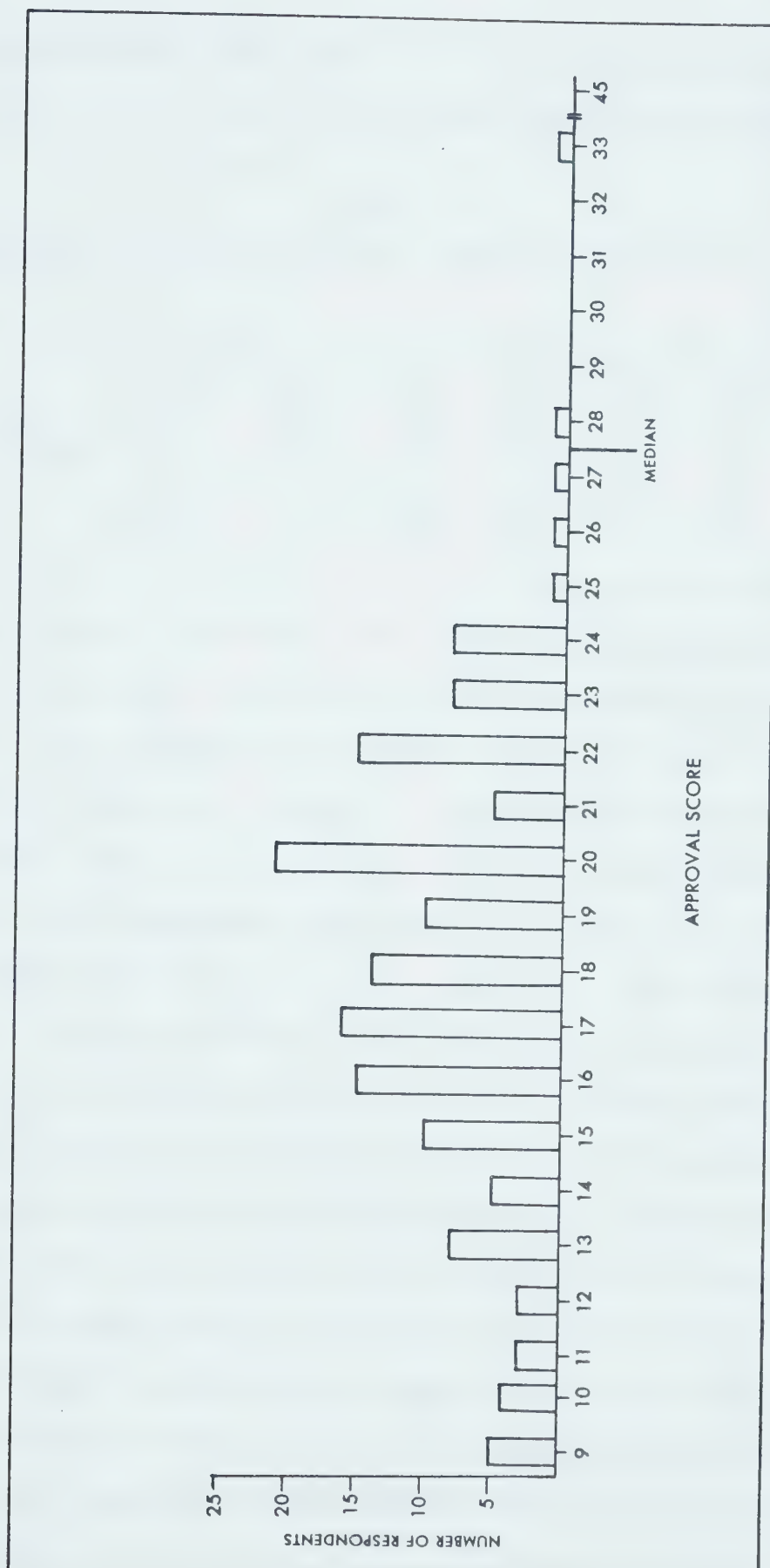


Figure 47. Distribution of Camper Approval-Scores.



at Jonas Creek on the first trip. The distribution of above and below average scores does reveal some basic differences

TABLE 52

## PERCENTAGE DISTRIBUTION OF CAMPERS' APPROVAL SCORES

| <u>Scores</u> | <u>Whole</u> | <u>K-1</u> | <u>R-1</u> | <u>J-1</u> | <u>K-2</u> | <u>R-2</u> | <u>J-2</u> |
|---------------|--------------|------------|------------|------------|------------|------------|------------|
| 9-18 (low)    | 55.3         | 60         | 56         | 48         | 56         | 56         | 68         |
| 19-33 (high)  | 44.7         | 40         | 44         | 52         | 44         | 44         | 32         |
| Totals        | 100.00       | 100        | 100        | 100        | 100        | 100        | 100        |
| 23-33         | 14.1         | 0          | 16         | 24         | 8          | 24         | 12         |

between campers (see Table 52). From the distribution of low and high scores it appears that a chronological pattern is evident. The proportion of those interviewed campers receiving average and lower scores is greater at the beginning and ends of the camping season than during the peak camping season. Although the campgrounds together do not seem to exhibit patterns which set them apart from each other, the campers during the first research period in Mt. Kerkeslin exhibited a clustering of approval scores around the average score of seventeen and only one camper obtained a score above twenty. During the second research period campers' scores again clustered about the average with distribution of high and low scores being equal above and below seventeen, however, only 8% of the sample scored above twenty-three (see Table 47) which was the second to the lowest sample proportion scoring in this range. Few campers at Mt. Kerkeslin had very high approval



scores and of the lowest scores (nine and ten) 44% of them came from campers at this campground. Jonas Creek campers appeared to be subject to the extreme approval scores as 44% of the lowest scores came from here as well as 60% of the five highest scores.

The only camper characteristic which was in any way related to this score was that of equipment ownership. Campers with tents had very average scores but when tent campers of all kinds (automobile, bicycle, and motorbicycle) were included together they accounted for four of the five highest scores, but only four of the lowest twenty-three scores. One camper owning a wheeled recreation vehicle attained one of the five highest scores, yet of the lowest twenty-three scores campers who owned recreation vehicles (trailers, truck campers, vans, and motor homes) attained nineteen scores. This relationship might tend to explain why Jonas Creek had such a wide range of scores as three of the five campers with tents and two-wheeled vehicles (bicycles and motorbicycles) were interviewed here. Mt. Kerkeslin with a predominance of tenters exhibited very average scores while Rocky River and Jonas Creek with a wide range of equipment also had campers exhibiting fairly wide ranges of approval scores. The relationship here is not very clear, again possibly due to the small sample size.

The data from this attitude component test must be approached with some caution as the flaws in this test are fairly evident. It appears that most of the interviewed





campers did not highly approve of the nine depreciative activities included in the approval score. From analysis of each item it is evident that some discrepancies exist between the camper's opinions and his behavior. In some instances the camper is aware of the regulations and the suitability of the action in the campground and yet violates the regulation, and in other instances he is not aware of the damage caused by various actions which he may or may not know are contradictory to park rules.

#### The Action Component of Camper Attitudes

A similar technique to that used above was employed to assess the campers' predispositions to act in depreciative behavior situations. Six items involving hypothetical depreciative behavior situations were read to the respondent and he was asked to choose one of five reactions which he thought he would take if he were to see any of the various activities taking place in the campground (see Appendix V, Question 10). These six items consisted of three legalistic, two vandalistic, and one nuisance act. Each individual's response was given a number and then all six responses were combined together to obtain an involvement score.

The three legalistic activities received various responses as their seriousness also varied. When the respondent was asked what he would do if he saw an adult camper littering in the campground there was little agreement between them (see Table 53). About one-fourth of the campers said



TABLE 53

## CAMPER RESPONSES TO ITEMS IN THE CAMPER INVOLVEMENT SCORE

| <u>Items</u>                                                                        | <u>Do<br/>Nothing</u> | <u>Tell Attendant<br/>when he comes</u> | <u>Go to nearest<br/>Warden Station</u> | <u>Speak to<br/>Offender(s)</u> | <u>Directly stop<br/>the activity</u> |
|-------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|-----------------------------------------|---------------------------------|---------------------------------------|
| Legalistic Acts                                                                     |                       |                                         |                                         |                                 |                                       |
| a) an adult camper verbally threatening another camper                              | 56 (37.3)             | 47 (31.3)                               | 11 ( 7.3)                               | 34 (22.7)                       | 2 ( 1.3)                              |
| c) an adult camper littering in the campground                                      | 39 (26.4)             | 44 (29.7)                               | 1 ( 0.7)                                | 58 (39.2)                       | 6 ( 4.1)                              |
| e) someone obviously stealing another campers equipment                             | 7 ( 4.7)              | 28 (18.8)                               | 29 (19.5)                               | 36 (24.2)                       | 49 (32.9)                             |
| Vandalistic                                                                         |                       |                                         |                                         |                                 |                                       |
| b) a child or group of children damaging a park facility                            | 2 ( 1.3)              | 22 (14.7)                               | 4 ( 2.7)                                | 74 (49.3)                       | 48 (32.0)                             |
| d) a teenage camper carving his initials in a tree or in some way damaging the tree | 20 (13.3)             | 33 (22.0)                               | 2 ( 1.3)                                | 73 (48.7)                       | 22 (14.7)                             |
| Nuisance                                                                            |                       |                                         |                                         |                                 |                                       |
| f) a group of older youths making excessive noise and drinking after 11:00 p.m.     | 28 (18.7)             | 43 (28.7)                               | 18 (12.0)                               | 60 (40.0)                       | 1 ( 0.7)                              |



they would do nothing, a little over one-fourth said they would tell the warden and about 38% said that they would speak to the offender. Some campers specified that the person would have to be doing a lot of littering before they would say anything. No observations were made of individual's taking any action when another camper littered, which points out the difference in what a person says he will do and what he actually does do. Over one-third of the respondents agreed that they would do nothing if they saw an adult camper verbally threatening another camper while almost another third stated that they would tell the campground attendant. A few campers (7.3%) indicated that they would go to a warden station and about 22.7% of the respondents felt that they would say something. The most serious of the legalistic acts involved someone stealing another camper's equipment. Of the interviewed campers 33% indicated that they would try to stop the activity, 24% said that they would talk to the person involved, 19.5% felt that they would go to the nearest warden station and 19% said that they would tell the attendant when he came. Only 4.5% of the sample indicated that they would do nothing. Since neither of the latter two activities occurred during the research periods no direct comparisons are possible. However if the overall camper involvement is any indication of total involvement it may be expected that little reaction would occur. However, this can only be a supposition at this time.

The reaction to the two vandalistic acts indicated that





the age of the offender has some effect on the reaction of the respondent to that activity. When asked what they would do if they saw a teenage camper damaging a tree about 36.7% of the campers felt that they would not get directly involved with the activity. Of those who indicated that they would get involved in the situation, most of them (48.7% of the sample) said that they would speak to the offender. Only 14.7% of the sample felt that they would directly try to stop the activity. When campers were asked a similar question in relation to children who were damaging a park facility about 32% said that they would stop the activity and 48% thought that they would speak to the children. In this instance only about 20% felt that they would not get directly involved. It appears that if the offender is a child the chances are greater that another camper may get involved in the situation. Although no campers were observed taking any action towards children involved in depreciative behavior, not a great many children were observed participating in depreciative behavior.

The one nuisance act used in this series of items was a little ambiguous as two acts were combined, excessive noise and drinking. About 18% of the interview respondents felt that they would do nothing if they saw a group of older youths making excessive noise and drinking after 11:00 p.m. About 28% thought that they would have told the attendant and 12% would have gone to the nearest warden station. While only one respondent felt that he would stop the activity about





40% of the sample campers said that they would speak to the youths. This particular situation was not observed during the thirty days, but no camper was observed taking any action regarding excessive noise any time of the day.

The involvement score for each respondent roughly indicated the degree to which each individual felt he would become involved in relation to the six depreciative behavior situations. The possible range of scores was from six (least involved) to thirty (personally involved in all six activities), although the actual range was from seven to twenty-eight. The score distribution was characterized by a very slight skewness to the right (i.e. towards more active involvement) of the median score of eighteen. The mean score for the sample was about 18.5 or about half a point above the median score. The sample as a whole exhibited a trend towards average involvement scores and a desire not to become personally involved in depreciative behavior situations (see Figure 48). The campers in the three campgrounds displayed some variation in relation to these scores. Campers at Mt.

TABLE 54

PERCENTAGES OF CAMPER INVOLVEMENT SCORES  
FOR THREE CAMPGROUNDS

| <u>Score Ranges</u> | <u>Whole</u> | <u>K-1</u> | <u>K-2</u> | <u>R-1</u> | <u>R-2</u> | <u>J-1</u> | <u>J-2</u> |
|---------------------|--------------|------------|------------|------------|------------|------------|------------|
| 7-17                | 44.4         | 36         | 36         | 44         | 48         | 48         | 52         |
| 18-28               | 55.6         | 64         | 64         | 56         | 52         | 52         | 48         |
| mean                | 18.40        | 18.76      | 19.52      | 18.28      | 18.36      | 17.88      | 17.64      |



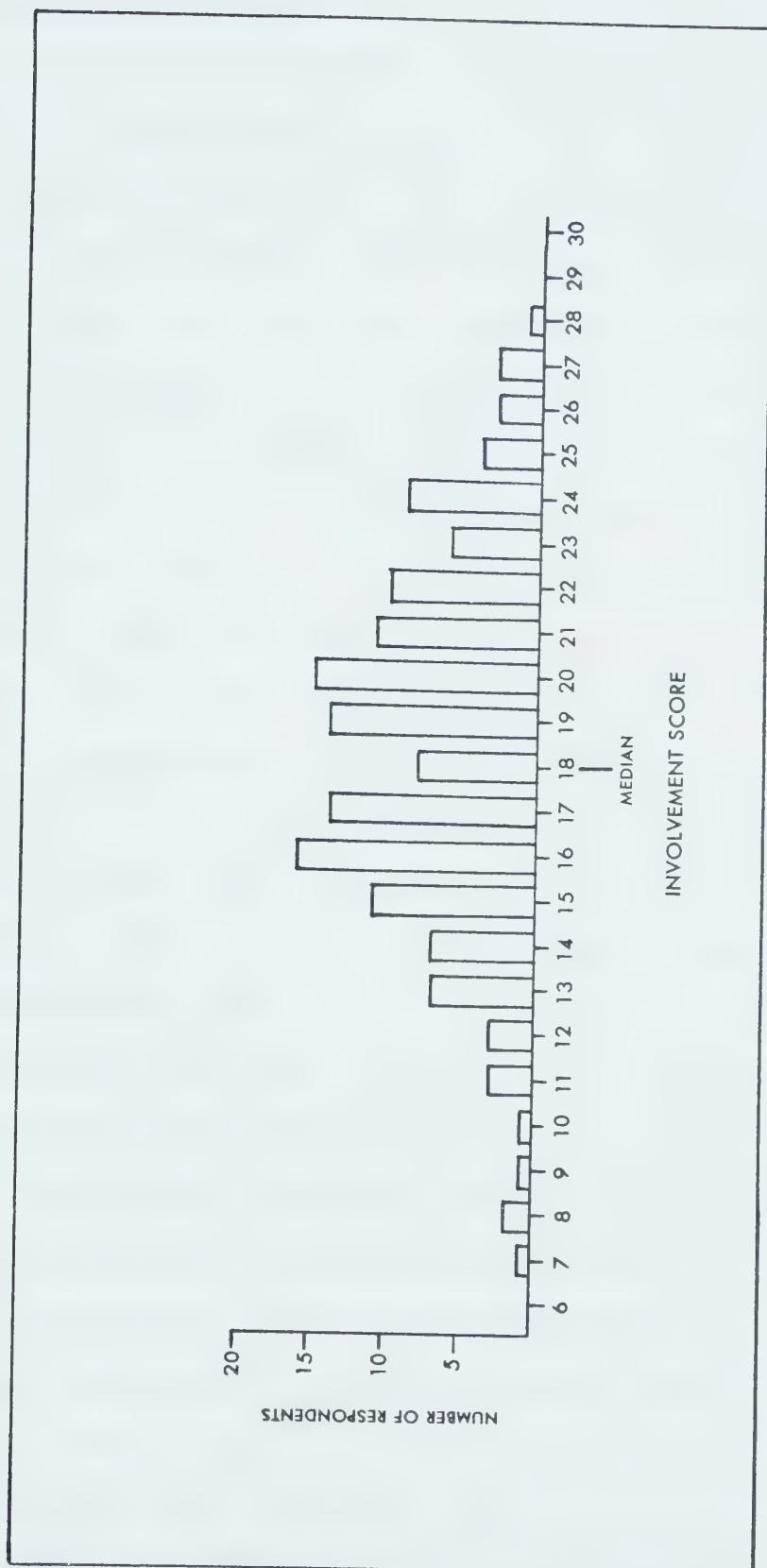


Figure 48. Distribution of Camper Involvement Scores.



Kerkeslin manifested the greatest propensity to become more involved in depreciative behavior situations as a greater proportion of campers had involvement scores above the average. Although campers at this campground exhibited a fairly wide range of scores the bulk of the scores were over the average (see Table 54). Rocky River campers followed Mt. Kerkeslin campers and scores at this campground were very close to the average for the whole group and were closely clustered about the mean. Jonas Creek campers exhibited a trend towards lower involvement scores than campers at the other two campgrounds.

Two factors which were found to affect this score were that of age and the campers' type of equipment (see Table 55). The exact relationship is not clear, but some trends were evident. The older respondents (41-60 years of age) tended to score slightly lower as a group than the younger respondents (18-40 years of age). This relationship was stronger among the male campers than it was among females. A possible explanation for this relationship may be that older respondents had family groups to take care of and they may have felt that their involvement should be restricted to their own family group. This would agree with the finding that respondents from larger groups scored low on the bother scale. Closely related to the age factor was that of equipment. It was found that tent owners as a group had a lower proportion scoring under the average scores of eighteen than



respondents owning wheeled recreation vehicles. Only about 36% of the respondents owning tents scored below the average

TABLE 55

PERCENTAGE DISTRIBUTION OF CAMPER INVOLVEMENT SCORES  
BY EQUIPMENT TYPE

| Type of Equipment | Number of<br>Respondents<br>Using Equipment | Percentage of<br>Respondents with<br>low scores (7-18) | Percentage of<br>Respondents with<br>high scores (19-28) |
|-------------------|---------------------------------------------|--------------------------------------------------------|----------------------------------------------------------|
| Bicycle & Tent    | 5                                           | .0                                                     | 100.0                                                    |
| Tent              | 53                                          | 35.9                                                   | 64.1                                                     |
| Tent-Trailer      | 24                                          | 57.6                                                   | 42.4                                                     |
| Trailer           | 20                                          | 50.0                                                   | 50.0                                                     |
| Truck Camper      | 24                                          | 60.5                                                   | 39.5                                                     |
| Van               | 7                                           | 71.5                                                   | 28.5                                                     |
| Motor Home        | 5                                           | 60.0                                                   | 40.0                                                     |

score while those owning other vehicles had proportions equal to the average percentage of scores which fell below eighteen (47.7% of the whole sample scored between seven and eighteen). The influence of equipment type on the involvement score is most likely related to the effect of age as those respondents with tents were most often the younger respondents. This may also be partial explanation of the differences between the three campgrounds as Mt. Kerkeslin had a predominance of campers using tents while Rocky River campers used a wide range of recreation vehicles and tents, and Jonas Creek campers predominantly used recreation vehicles.

One last point in relation to the involvement score related to camper responses on question sixteen which dealt





with the amount of responsibility a camper felt he should assume in helping to control the behavior of other campers. Of those who answered that they thought it was always their responsibility or only in severe circumstances about 48% had involvement scores of eighteen or less, while of those who responded "never" to question sixteen about 71% had low involvement scores (7-18). It must be remembered that 74% of the campers felt that it was their responsibility to help control the behavior of others in severe circumstances. Considering that four of the involvement items were fairly severe this response would tend to supplement the number of average and high involvement scores.

#### Some Conclusions Regarding Camper Opinions and Attitudes

Many varying distributions and relationships have been discussed above. It was generally concluded that the characteristics of the interviewed respondents were similar to those of the campers from which the sample was drawn. It was felt that some of the results from the camper interview can be applied to the population which was present in the three campgrounds throughout the summer season of 1972. Inferences made beyond this level must be made with caution. Campers in these three campgrounds seem to have largely preferred the undeveloped automobile campgrounds and many found the mobile attendant satisfactory. In general the campers seemed to feel that it should be their responsibility



to help control the behavior of other campers only in severe or exceptional circumstances. Observation evidence shows that this is most often the case.

Assessment of camper opinions found that most interviewed campers did not feel that the campgrounds had problems with camper behavior, but that factors of camping experience and the camper's residence distance from Jasper National Park tended to slightly increase the awareness of behavior problems. Of the respondents who did make suggestions for management changes the most often mentioned changes largely dealt with stricter enforcement of park regulations and improved site distinction. When campers were asked to suggest rules which they thought were important the primary focus was on cleanliness, consideration for other campers, fire safety, and care for the natural environment. This may be suggestive of areas for improving communication between management and clientele as about one quarter of all the depreciative behavior observed was directed at the natural environment. In general it was found that very few campers expressed feelings of dissatisfaction with the social campground environment or noticed any behavior problems. Some factors which appeared to have had a relationship with this apparent lack of perception were age, residence area, camping experience, and the camper's type of equipment. The relationship between these four characteristics is not clear at this time but it was felt that older campers who had more camping



experience were more perceptive of campground behavior problems. In some instances distance appeared to be a sensitizing factor, perhaps because of built up expectations of the area itself or due to past experiences in other areas. Many local people, Albertans in particular, were found to be less sensitive to camper behavior problems.

The interview respondents exhibited a fair degree of knowledge concerning certain campground rules when they were asked to recognize illegal activities in pictures. The effectiveness of rule postings on camper rule knowledge, although inadequately assessed in the camper interview, appeared to be quite minimal. The three scores which were used to assess the three components of an attitude varied in their effectiveness. The bother score used to assess the campers' feelings towards various types of depreciative behavior indicated that a majority of the respondents objected to four depreciative activities out of eight. Two activities involving social situations (noise and taking chopped wood) and one involving natural environment damage definitely bothered most campers. The other activity or activities which were found objectionable depended on the camper's tolerance level. Here again greater proportions of respondents from greater distances (the eastern United States and Canada) had bother scores above the average, except for campers from the Canadian provinces of Saskatchewan and Manitoba who had lower overall sensitivity to the bother items. It was felt that most campers were fairly





tolerant of depreciative behavior, but that certain activities which directly infringed upon the individual were not considered very favorably.

The scale which was felt to be least reliable was that which attempted to test the evaluative beliefs of the respondents. The findings from a group of nine depreciative situations which the camper evaluated on the basis of a five point scale from right to wrong indicated that campers generally did not approve of the five legalistic infractions, three vandalistic violations, two nuisance acts, and one camper etiquette problem. If the results of this scale are evaluated in the light of the previously mentioned failings it may be said that campers verbally express beliefs which reveal that he is aware of regulations and rules and that he feels certain depreciative behavior is wrong in a campground. However, if the circumstances demand then many campers condoned various types of depreciative behavior as necessary or appropriate. The mechanics of this function have bothered more than one social scientist and this is a very interesting area for further research.

The last scale designed to measure the predispositions of the camper to respond to various types of problem behavior was felt to be reliable in some respects. The depreciative acts used in this scale were of a fairly serious nature and during the thirty days of data gathering only two of the activities were observed. Different results may have been





obtained if more common types of behavior had been used. However, the response to one of the more mundane items involving littering indicated that the overall scale may be fairly reliable. The distribution of involvement scores could be taken as pointing out that a fair degree of non-involvement was subscribed to by the campers. This finding is somewhat at variance with the northwestern United States study in which it was found that most campers expressed good involvement intentions, even though the same basic items were used to assess camper involvement. However, the two response patterns are not directly comparable as the range of possible alternative actions were somewhat different because no permanent staff were directly available to campers in the undeveloped campgrounds used in this study as they were in the northwestern developed campgrounds. It should also be apparent that the camping populations were drawn from different spatial areas. Most respondents appeared to advocate measures which would not personally involve them (e.g. complain to a warden) unless it was clear that the danger to them was minimal and then the preferred involvement was of a verbal nature. Very few campers felt that they would consistently do nothing in all of the activity situations, even those of a less serious nature, which meant that the majority of campers would ascribe to some kind of involvement if they were to observe certain types of depreciative behavior.

During the observation periods very little camper involvement took place and then it was always a verbal



confrontation with the offender. No camper reported any activity to the attendant or the wardens. This may tend to indicate that those with high involvement scores may be more apt to behave in accordance with their verbal responses, but in what manner it is not known. However, the above is only a supposition because although many of the campers ascribed to good intentions very little of this behavior was actually observed.

In general the campers interviewed in this study did not reveal radical opinion or attitude differences from those studied in the larger developed and serviced campgrounds, but much more research needs to be conducted before this is found to be the case. Although the interview format itself had flaws, especially semantic flaws, and may have been too personally directed at the respondent who may have felt the need to defend himself and his behavior, the researcher felt that the majority of campers were open and fairly honest.

The findings from this interview would seem to indicate that although campers hold attitudes which would appear to make them fairly sensitive to some types of socially depreciative behavior they are not aware that depreciative behavior which affects both the social and natural environment is occurring in the undeveloped campgrounds in which they are camping. The importance of these results to the establishment of effective carrying capacity limits should be realized. Although campers would be bothered, do not approve, and would get involved if they saw certain types of depreciative behavior



they do not seem to be aware that their own behavior and that of other campers is largely responsible for certain social and natural environmental degradation. It may be that campers have indeed adjusted to the mounting pressures related to overcrowding in national park campgrounds. This would further indicate that a camper's social carrying capacity limits can far exceed those of the natural environment and unless this is dealt with there is great potential for further deterioration of the natural environment as more and more campers seek to use campgrounds in the mountain national parks. There are various ways of bringing the social and natural carrying capacity limits closer together, but an initial decision must first be made as to which carrying capacity limit is to assume predominance over the other. Whichever limit is selected it should be realized that results from studies such as this one may indicate that there is a potential for reducing the disparity between the camper's awareness of depreciative behavior problems in campgrounds and his attitudes towards that behavior. It should be determined whether or not the development of an unawareness towards depreciative behavior and a tolerance to overcrowding are undesirable in a Canadian national park. The gap between a camper's awareness of behavior problems and his attitudes towards those problems should be realized by those responsible for the management of Canadian National Parks and the communication of park values.





## CHAPTER VII

### THE MANAGEMENT VIEWPOINT

It has been noted earlier that some researchers (Hendee and Harris, 1970; Hendee and Pyle, 1972) have found management viewpoints differ from those of their clientele. Clark, Hendee, and Campbell (1971) mentioned that although management personnel held the same traditional values of camping they differed in their attitudes towards the ways of accomplishing those objectives. In the northwestern United States study the above researchers found that managers felt depreciative behavior was serious and viewed it as a problem while the camper did not see such behavior as serious or as a problem. Managers were found to underestimate the involvement intentions of the camper. It must be remembered, however, that managers often are exposed to the worst of the camping public as they often must deal with behavior problems and complaints. In this study campers were personally interviewed because they were readily accessible in the recreation environment. Management personnel were not as accessible during the camping season, so mailed questionnaires were used to assess their viewpoint.

It was expected that if management personnel were asked the same questions as the camper that their responses





would be different. Not only were managers asked for their own viewpoints, but for what they thought the campers' viewpoints would be. The first part of this chapter is devoted to a discussion of the characteristics of the management personnel responding to the questionnaire and what they felt were the camper characteristics. The next section will deal with management opinions and their state of knowledge concerning rules and regulations while the third part will be centered on a discussion of the attitude sections of the questionnaire and how managers compare with campers and how they feel campers would respond to the same questions. Following this will be a final concluding section to end the chapter.

#### Management Characteristics and their Opinions Concerning Camper Characteristics

Of the forty-five questionnaires sent out, twenty-one were eventually returned, or a response rate of 46.6%. Considering the small total population size a response rate of nearly half was considered favorable, especially when one takes into account the length of the interview form (Appendix VII). Of the twenty-one respondents about one-third were mobile campground attendants (seven out of eight responded), one-third were wardens (eight out of twenty-six responded) and park naturalists (four out of seven responded). The only management element which may be considered underrepresented were the wardens, however, some



wardens were not stationed in areas of the park where they were likely to meet many undeveloped automobile campground campers and others felt that they could not give accurate responses for the camper viewpoint and did not answer the questionnaire. Although the sample was weighted in favor of mobile campground attendants, these were the personnel who had the most contact with undeveloped automobile campgrounds throughout the camping season. Their responses were considered essential to this study. Of the nine wardens and park administrators only one warden was employed part time while of the eleven attendants and park naturalists only two of the naturalists were full-time employees. Half of the part time staff were students while the other half were composed of tradesmen, winter seasonal employees, and those who didn't respond to the question. The mean number of years that the respondents had worked in Jasper National Park was 3.7 years. The mean number of years which the respondents had worked for the Canadian National Park Service was higher (5.2 years) but the distribution revealed that three quarters of the respondents had worked for the Park Service less than five years (see Table 56). This may be a reflection of the fact that about 45.6% of the sample consisted of part time employees. It is a characteristic of many national parks in North America that they triple their staff by the hiring of seasonal employees. A large majority of the sample had worked for the Canadian National Park



TABLE 56

NUMBER OF YEARS MANAGEMENT PERSONNEL WORKED FOR  
CANADIAN NATIONAL PARK SERVICE

| <u>Number of Years</u> | <u>Number of Respondents</u> | <u>Percentage of Sample</u> |
|------------------------|------------------------------|-----------------------------|
| 0-1                    | 1                            | 4.8                         |
| 1                      | 4                            | 19.0                        |
| 2-5                    | 11                           | 52.4                        |
| 6-10                   | 1                            | 4.8                         |
| 11-15                  | 2                            | 9.5                         |
| 16-20                  | 2                            | 9.5                         |
|                        | <u>21</u>                    | <u>100.0</u>                |

Service for more than one year. For about 23% of the sample the 1972 season was their first year with the Canadian National Park Service which balanced very well with the 24% who had worked over six years for the park service. Although the overall distribution of management personnel by their years of working experience was not known it was felt that the sample was fairly representative of the whole, with a slight bias towards those who had worked for the park service under five years.

Management estimations of the number of years and days per year that an average undeveloped highway campground camper had been camping were much lower than the averages gained from the interviewed campers (see Table 57). Figures from the 1966 Jasper Visitor Use Survey (Nixon, 1967a:5A) point out that campers reported lower figures for the average number of years camped than those reported in this study.



TABLE 57  
CAMPER RESPONSES AND MANAGEMENT ESTIMATES OF CAMPING EXPERIENCE

| <u>Days</u>           | <u>Number of Days Camped Per Year</u> |                             | <u>Years</u> | <u>Number of Years Camped</u>   |                             |
|-----------------------|---------------------------------------|-----------------------------|--------------|---------------------------------|-----------------------------|
|                       | <u>Management<br/>Estimates</u>       | <u>Camper<br/>Responses</u> |              | <u>Management<br/>Estimates</u> | <u>Camper<br/>Responses</u> |
| 1-7                   | 20.0%                                 | 18.0%                       | 0-5          | 90%                             | 37.3%                       |
| 8-14                  | 60.0%                                 | 28.0%                       | 6-10         | 10%                             | 22.0%                       |
| 15-21                 | 20.0%                                 | 17.3%                       | 11-20        |                                 | 23.3%                       |
| 22-30                 |                                       | 19.3%                       | 21-40        |                                 | 13.3%                       |
| 31-50                 |                                       | 11.3%                       | 41+          |                                 | 4.0%                        |
| 51-100                |                                       | 4.7%                        |              |                                 |                             |
| 100+                  |                                       | 1.3%                        |              |                                 |                             |
| Average               | 11.9                                  | 24.8                        |              | 4.2                             | 12.4                        |
| Standard<br>Deviation | 4.4                                   | 31.1                        |              | 1.9                             | 11.5                        |





However, it appears that a general increase in camping began in the 1960's and the difference between 1966 and 1972 must be taken into account. The underestimation of the average camper's experience by management may be a reflection of a true misunderstanding or it may reflect possible management opinions that the average camper is inexperienced, due to the behavior he exhibits.

When managers were asked if they thought campers who selected undeveloped automobile campgrounds did so because they preferred them about 54.4% of the questionnaire respondents thought that this was the case. The management viewpoint here was very close to the figures reported by the campers as 63.3% of them responded that they did prefer the undeveloped campground. Managers tended to feel that most Albertans entered Jasper National Park from the east park gate and that they preferred to camp in the developed and serviced campgrounds such as Whistlers and Wapiti near the Jasper townsite (the above two campgrounds received 68.8% of all the campground mentions). Although no current data were available Nixon (1967a) in his Jasper visitor survey of 1966 reported that the percentage of Albertans in each campground was higher in those campgrounds between Jasper townsite and the east gate.

In assessing the characteristics of the camper management personnel were correct in some cases and in others appeared to have some misconceptions such as their estimations of camper experience. Since data from all undeveloped



campgrounds were not available the accuracy of their judgments cannot be appropriately determined.

### Management Opinions

Similar to the discussion of the camper interview the types of questions asked in the questionnaire have been divided up into opinion questions which were not related to each other in any specific manner and attitude questions which were groups of questions placed together to make up a score. In order to determine the opinions of the manager concerning the purpose of the Canadian National Parks two questions were asked, the second of which dealt with the managers personal views. When asked what was the main purpose of the parks about 71% used the park policy statement<sup>1</sup> while the remainder took a preservation point of view. When asked for their personal views on the purpose of the parks about 43% thought that the parks should be preserved as naturally as possible, 34% used the park policy statement, and 14% thought that parks policy should be based on long term demands instead of short term. In general many managers seemed to feel that preservation should be emphasized rather

---

<sup>1</sup>"The Parks are hereby dedicated to the people of Canada for their benefit, education and enjoyment, subject to the provisions of this Act and the regulations, and such Parks shall be maintained and made use of so as to leave them unimpaired for the enjoyment of future generations" (National Parks Act, 1930).



than recreational supply. Wardens and park naturalists were more preservation oriented than administration personnel and mobile campground attendants, perhaps due to the differing job orientations.

Managers were very accurate in assessing the reasons why campers liked to camp as they mentioned exactly the same reasons as the camper and in the same order of importance. However, when managers were asked what they thought were the reasons why campers selected the small undeveloped automobile campgrounds they placed more emphasis on the characteristics of the campground and the force factor (there were no other campgrounds available) than did the interviewed campers (see Appendix IX, Table 58). Campers emphasized the immediate choice aspects of campground selection, while many indicated that they had planned their stop from a map of some type. Campers placed the force element in fifth place while managers placed it in a tie for the first place. The fact that many reasons were given and no one reason was clearly selected over the others means that managers were not clear as to the reasons why campers select certain campgrounds.

Various opinions concerning camper behavior and management policy were covered in a series of questions at the end of the questionnaire. Managers indicated that they felt safe while camping as only 9.5% responded that bears, theft, and vandalism bothered them. Management and camper opinions of themselves as individuals were very close in this respect, but when managers were asked to assess camper opinions 57%





thought that campers would feel unsafe, primarily due to bear problems. This may be due to the many contacts which management personnel may have had with nervous campers who asked questions or were actually bothered by a particular bear. About half of the management personnel felt that a camper's behavior should be different in a national park in that he should take more care of the flora and fauna in the park. Managers indicated that they thought few campers would feel their behavior should be different which was the case in the camper interview.

#### Attendant Preferences and Responsibility

When comparing the camper and manager preferences for various types of campground attendants one finds that they were similar in some respects (equal emphasis on the permanent staff, no attendant, and nonpreference), and different in others such as less management emphasis on the mobile attendant while the interviewed campers had a greater preference for the mobile attendant. A great proportion of managers felt that the type of attendant they preferred depended on the size and type of campground. When managers attempted to assess the campers preferences (see Table 59) they heavily emphasized the permanent attendant whereas campers had proportionately fewer responses in this category than did management in their own preference. In general campers were more satisfied with the mobile attendant and had more nonpreferences than managers





TABLE 59  
MANAGEMENT AND CAMPER PREFERENCES  
FOR CAMPGROUND ATTENDANTS

| <u>Attendant<br/>Type</u>         | <u>Management<br/>Preferences</u> | <u>Camper<br/>Preferences</u> | <u>Management's Camper<br/>Preferences</u> |
|-----------------------------------|-----------------------------------|-------------------------------|--------------------------------------------|
| Mobile                            | 9.5%                              | 35.3%                         | 14.3%                                      |
| Permanent                         | 28.6%                             | 26.7%                         | 66.7%                                      |
| None                              | 14.3%                             | 11.3%                         | 4.8%                                       |
| Depends on the<br>campground size | 28.6%                             | 7.3%                          | 4.8%                                       |
| No Preference                     | 19.0%                             | 18.0%                         | 9.5%                                       |
| Mobile or Permanent               |                                   | 1.3%                          |                                            |

estimated that they would. When comparing the three sets of responses from Table 59 it appears that manager's personal preferences are closer to camper preferences than are management's assessment of camper preferences.

A large majority of management personnel felt that it was their responsibility to help control the behavior of other campers while they are camping only in severe circumstances

TABLE 60  
MANAGEMENT AND CAMPER RESPONSIBILITY PREFERENCES

| <u>Controlling Behavior<br/>Response</u> | <u>Management<br/>Responses</u> | <u>Camper<br/>Responses</u> | <u>Management's<br/>Camper Responses</u> |
|------------------------------------------|---------------------------------|-----------------------------|------------------------------------------|
| never                                    | 0                               | 9.3%                        | 14.3%                                    |
| only in severe circum-<br>stances        | 90.5%                           | 74.0%                       | 76.2%                                    |
| at all times                             | 9.5%                            | 16.1%                       | 4.8%                                     |
| Totals                                   | 100.0                           | 99.4*                       | 95.3                                     |

\*Figures may not reach 100% due to nonresponse



(90.5%). Managers were fairly close in their responses gauging the campers' feelings of responsibility, but they tended to stress the "never" responses and underestimated the "always" responses, which here again indicates that management personnel may tend to base their assessment of camper feelings of responsibility on their observations of campers' actions in helping to control the behavior of their fellow campers. Only one manager responded that a camper would feel that he should help control the behavior of other campers at all times but proportionately more campers responded "at all times" than did management personnel.

Management estimates of the attendant preferences of campers were further from the interviewed camper responses than were their own preferences. Although managers tended to under-emphasize the extent to which campers felt they should help control the behavior of other campers they were fairly close in their assessment that a norm of noninvolvement would prevail unless circumstances were severe.

#### Management Opinions Towards Behavior Problems in Undeveloped Campgrounds

As expected the majority of managers (90.5%) felt that undeveloped automobile campgrounds in Jasper National Park had problems with camper behavior. They cited such problems as: 1) noise created by campers, 2) violations of park regulations, 3) damage of natural areas, 4) camping in non-designated sites, 5) open fires, and 6) leaving food where



it attracts bears. A total of thirty-five mentions was made of seventeen various problems (see Appendix IX, Table 61a), most of which were observed during the observation periods. A little over half (57%) of the managers felt campers would indicate that there were problems in these campgrounds (see Appendix IX, Table 61b). Only 12% of the interviewed campers actually responded in this manner. Both managers and campers placed noise problems at the top of the list as well as litter which managers felt campers would rank highly. In general managers were accurate in assessing the kinds of problems which campers would mention, although campers put more stress on environmental damage than many managers thought they would. Many managers failed to realize that campers were generally not aware of the depreciative behavior problems in the undeveloped campgrounds. Again this may be related to the increased contact that managers have with campers who are complaining about problems.

#### Opinions Towards Management Changes in Campgrounds

About two-thirds of the managers responded that they could suggest management changes which would affect campers' behavior that they would like to see in undeveloped campgrounds. These suggestions primarily involved better cleaning of the campground facilities such as garbage cans, toilets and fireplaces and more supervision of campers (see Appendix IX, Table 62a). Some more severe suggestions involved the removal





of facilities such as fireplaces or closing the smaller campgrounds altogether so that campers could be in larger campgrounds where they could be supervised around the clock, but these suggestions only constituted three out of the twenty-one suggestions. The same proportion of managers (two-thirds) responded that campers would have suggestions for management changes. Of the interviewed campers only 27.3% felt that they could suggest management changes. Managers place camper suggestions for permanent staff as one of top three suggestions they felt campers would make and it was the suggestion which received the most mentions from the interviewed campers. However, a great many managers felt that campers would suggest facility improvements (see Appendix IX, Table 62b) such as better toilets, water systems, disposal areas, garbage removal, and cleaning. Campers did not emphasize these areas, but placed more stress on additional enforcement and supervision as well as improved site designation. Basically managers overestimated the proportion of campers who would make suggestions for management changes and tended to feel that campers would be more concerned with facility improvement than they actually were in the camper interview.

Management Rule Knowledge and Estimations of  
Camper Rule Knowledge

As in the camper interview managers were asked to name two or three rules which they felt were important before





proceeding with the attitude questions. Out of the twelve rules the following five rules accounted for 79% of all the mentions: 1) cleanliness, 2) not feeding or molesting wildlife, 3) consideration for other campers, 4) consideration for the environment, 5) only camping in designated sites. When managers were asked to list two of three rules which the camper might mention the five top rules were the same as those mentioned by the interviewed campers and in the same order of importance. Managers seem to place more stress on the environment-oriented rules while they correctly assessed campers as placing emphasis on the social rules of camping. A general question which dealt with management estimations of camper knowledge (question twenty-two) asked the manager if he felt that the average undeveloped automobile campground camper in Jasper National Park was familiar with the rules and regulations which govern behavior within the campgrounds. A little over two-thirds of the managers responded that the camper was not familiar with the rules and regulations, three managers indicated that they thought campers were familiar with the rules, and three said that they did not know. It is believed that managers may have underestimated the extent of camper knowledge because of the amount of depreciative behavior which they have seen taking place and therefore assumed that campers do not know the rules. The interviewed camper in this study has indicated that he was more aware of the regulations and rules than management personnel suspected,



or than his behavior might have indicated. As is often the case an individual's attitudes or knowledge of a certain rule or regulation does not mean that he will subsequently obey that rule or regulation.

The response to the six pictures of which four depicted illegal activities, was used as another indication of the way in which managers viewed camper knowledge concerning various regulations and rules. When management personnel assessed the legality of the six activities only three incorrect guesses were made, one on picture three and two on picture one. The difficulty with picture one again may be due to misunderstanding of whether or not the man was actually trying to feed the bear. About two-thirds of the managers felt that campers would recognize the illegality of the man feeding the bear (see Table 63) which is a smaller proportion than the 87.3% of the interviewed campers who did recognize the activity in picture one as illegal. Management assessments and camper responses were about the same for picture two. About 90% of the managers thought that campers would not recognize the woman placing a nail in a tree as an illegal activity (picture three). Of the interviewed campers 82% did recognize the above activity as being illegal and 12% were not sure. In total only 6% of the campers did not think that a nail in a tree was against Canadian national park rules. This was the greatest management underestimation of camper knowledge which occurred. Camper responses to pictures four and five were



TABLE 63

MANAGEMENT ESTIMATIONS OF CAMPER RESPONSES TO THE LEGALITY  
OF SIX ACTIVITIES SHOWN IN PICTURES

| <u>Picture</u> | <u>Management's Camper<br/>Responses</u> |           |                   | <u>Camper Responses</u> |           |                   |
|----------------|------------------------------------------|-----------|-------------------|-------------------------|-----------|-------------------|
|                | <u>Yes</u>                               | <u>No</u> | <u>Don't Know</u> | <u>Yes</u>              | <u>No</u> | <u>Don't Know</u> |
| 1*             | 13(64.3)                                 | 8(35.7)   |                   | 139(87.3)               | 13( 8.3)  | 6( 4.0)           |
| 2              |                                          | 19(90.5)  | 2(9.5)            | 3( 2.0)                 | 138(92.0) | 9( 6.0)           |
| 3*             | 2( 9.5)                                  | 19(90.5)  |                   | 123(82.0)               | 9( 6.0)   | 18(12.0)          |
| 4*             | 19(90.5)                                 | 2( 9.5)   |                   | 148(98.7)               | 2( 2.3)   |                   |
| 5              |                                          | 20(95.2)  | 1(4.8)            | 1( 0.7)                 | 140(93.3) | 9( 6.0)           |
| 6*             | 8(35.7)                                  | 12(57.1)  | 1(7.2)            | 124(82.7)               | 14( 9.3)  | 11( 8.0)          |

\*illegal activities

correctly assessed by managers while picture six was again underestimated. Only 35.7% of the managers felt that campers would recognize uncontrolled pets as being against park regulations. About 82.7% of the campers did recognize this as an illegal activity and only 9.3% felt that it was not against park regulations. The results of the picture series can be taken as more evidence that many management personnel did not recognize the state of the campers' knowledge concerning basic campground rules. Managers may base their assessment on their observations of certain types of camper behavior from which they infer that campers could not be aware of the rules. Knowledge of rules and regulations does not necessarily predispose a camper to pattern his behavior in a similar manner. It must be realized that when a social environment pervades in a campground where the camper risks little by breaking rules which he does not clearly





understand depreciative behavior is almost certain to occur especially when this campground environment is complicated by overcrowding. Perhaps better communication of the reasons behind certain rules would improve camper behavior.

### Manager Attitudes and their Assessment of Camper Attitudes Towards Depreciative Behavior

Each of the three series of questions designed to measure the three basic components of an attitude used in the camper interview were also used in the management questionnaire. Management personnel were asked to check the items according to both their own views and how they thought the average camper would respond. Managers were asked to respond to the attitude questions as if they themselves were camping, not as they would in their official capacity. Each of the items in the series as well as the scores will be discussed in the subsequent sections of this chapter.

#### Affective Component of an Attitude

Management response to the eight activities which may or may not have bothered them in a campground (Appendix V, Question 8) revealed that activities which bothered the manager were not thought of by the managers as bothering the camper to the same degree. These activities (items 'a', 'b', and 'd') were primarily natural environment oriented items. Other items mainly involved with social activities ('c', 'e', and 'g') were thought by many managers to bother campers to a greater extent





TABLE 64

## MANAGEMENT AND CAMPER RESPONSES TO BOTHER SCORE ITEMS

| Items                               | Managers   |           | Managers' Camper |            | Camper Responses |            |
|-------------------------------------|------------|-----------|------------------|------------|------------------|------------|
|                                     | <u>Yes</u> | <u>No</u> | <u>Yes</u>       | <u>No</u>  | <u>Yes</u>       | <u>No</u>  |
| a) unburned litter                  | 18 (85.7)  | 3 (14.3)  | 13 (61.9)        | 8 (38.1)   | 81 (54)          | 67 (44.7)  |
| b) catching squirrels               | 21 (100.0) | 0 ( .0)   | 9 (42.9)         | 11 (52.4)  | 133 (88.7)       | 16 (10.7)  |
| c) loud radio                       | 13 (61.9)  | 8 (38.1)  | 16 (76.2)        | 4 (19.0)   | 71 (47.3)        | 77 (51.3)  |
| d) vehicle parked on<br>vegetation  | 18 (90.0)  | 2 (10.0)  | 0 ( .0)          | 21 (100.0) | 35 (23.0)        | 111 (74.0) |
| e) children running<br>through site | 12 (57.1)  | 9 (42.9)  | 15 (71.4)        | 6 (28.6)   | 60 (40.0)        | 89 (59.3)  |
| f) taking wood                      | 20 (95.2)  | 1 ( 4.8)  | 13 (61.9)        | 8 (38.1)   | 144 (96.0)       | 6 ( 4.0)   |
| g) loud gathering                   | 19 (90.5)  | 2 ( 9.5)  | 20 (95.2)        | 1 ( 4.8)   | 115 (76.7)       | 35 (23.3)  |
| h) children playing<br>ball         | 3 (14.3)   | 18 (87.5) | 3 (15.0)         | 17 (85.0)  | 5 ( 3.3)         | 144 (96.0) |



than they bothered the managers. In general proportionately more managers were personally bothered by seven of the eight activities than were the interviewed campers (see Table 64). About 88% of the managers said they would be bothered by unburned litter in the fireplace and over half tended to feel that campers would be bothered by it also. This estimate was close to the camper estimate of this activity. All the managers felt that they would be bothered by children catching small squirrels, but fewer (43%) thought that campers would be bothered by this. Actually the majority (88.7%) of the interviewed campers indicated that squirrel catching would bother them. About three-quarters of the managers felt that radio noise would bother campers, an activity which would bother less than half of the camper respondents. The next item which involved vehicles parked in undesignated areas would bother 90% of the managers, but they all felt that this activity would not bother campers. Although few campers indicated that it would bother them, nearly a quarter of the sample did respond that it would. Children running through the campsites would bother proportionately less campers than managers although 71% of the managers felt that this activity would bother campers. Management's own viewpoint concerning a man taking chopped firewood was closer to that of the interviewed camper than their estimation of the camper viewpoint. Although a loud gathering at a campsite would bother 90% of the managers and about 95% felt that it would bother the camper only three-quarters of



the camper respondents indicated that this activity would bother them. The last item involving children playing ball would not bother many managers or campers, although here again a few managers overestimated how much this would bother the camper. From the response patterns to the above items it appears that many managers definitely tended to overestimate the extent to which social activities could bother the camper. On the other hand the managers tended to underestimate the extent to which campers were bothered by environmentally damaging activities, although in both cases involving environmental damage proportionately more managers were bothered than campers.

A general assessment of all the items was attempted by comparing the range of bother scores for managers and campers (see Table 65). Although managers' scores were distributed towards the higher end of the scale their estimation of the camper scores placed many managers towards the middle and lower end of scale which was fairly close to the distribution of camper respondent scores. The averages of the camper scores and managements' camper scores were almost the same and the only variation occurred in the standard deviation which indicated that managements' bother scores were more closely clustered around their mean than the camper respondents' scores. Managers had higher scores than campers and revealed a greater sensitivity to the eight depreciative acts included in the scale. Managers



TABLE 65

## DISTRIBUTION OF MANAGEMENT AND CAMPER BOTHER SCORES

| <u>Bother<br/>Score</u>                    | <u>Management<br/>Response</u> | <u>Management's<br/>Camper Response</u> | <u>Camper<br/>Response</u> |
|--------------------------------------------|--------------------------------|-----------------------------------------|----------------------------|
| 1                                          |                                |                                         | 3 ( 2.0)                   |
| 2                                          |                                | 2 ( 9.5)                                | 11 ( 7.3)                  |
| 3                                          |                                | 4 (19.0)                                | 28 (18.7)                  |
| 4                                          | 2 ( 9.5)                       | 5 (23.8)                                | 41 (27.3)                  |
| 5                                          | 7 (33.3)                       | 8 (33.3)                                | 40 (26.7)                  |
| 6                                          | 5 (23.8)                       | 3 (14.3)                                | 20 (13.3)                  |
| 7                                          | 5 (23.8)                       |                                         | 5 ( 3.3)                   |
| 8                                          | 2 ( 9.5)                       |                                         | 2 ( 1.3)                   |
| Mean                                       | 5.9                            | 4.2                                     | 4.29                       |
| Standard<br>Deviation                      | 1.18                           | 1.2                                     | 1.38                       |
| Percentage<br>obtaining scores<br>from 1-4 | 9.5%                           | 52.3%                                   | 55.3%                      |

appeared to be more tolerant of socially oriented behavior problems and less tolerant of environmentally oriented behavior than campers.

## Cognitive Component of Attitude

Of the various activities included in the series of items used to test the evaluative beliefs of managers most of them were not approved by managers, except for the two nondepreciative activities. The figures shown in Table 66 consist of the average (mean) responses for each item which are an addition of all the numeric values given to each response divided by the number of campers or managers





TABLE 66

MEANS AND STANDARD DEVIATIONS OF MANAGEMENT AND CAMPER RESPONSES  
TO APPROVAL SCORE ITEMS

| Items                                                                              | Management |                    | Managements' Campers |                    | Campers Mean |
|------------------------------------------------------------------------------------|------------|--------------------|----------------------|--------------------|--------------|
|                                                                                    | Mean       | Standard Deviation | Mean                 | Standard Deviation |              |
| a) throwing used dishwater into nearby shrubs                                      | 1.8        | 1.3                | 3.3                  | 1.3                | 2.2          |
| b) picking a few leaves and flowers to take home                                   | 1.2        | .87                | 3.3                  | 1.2                | 1.7          |
| c) teaching children to stay away from wild animals                                | 4.6        | 1.2                | 3.5                  | 1.1                | 4.9          |
| d) taking chopped firewood from an empty site                                      | 2.7        | 1.1                | 3.4                  | .93                | 3.0          |
| e) wandering around the campground intoxicated                                     | 1.2        | .5                 | 1.6                  | .94                | 1.1          |
| f) vacating a campsite in the late afternoon around 3:30 p.m.                      | 2.0        | 1.1                | 3.2                  | 1.2                | 2.6          |
| g) putting out a fire another camper left burning after he has left the campground | 4.5        | 1.2                | 4.0                  | .95                | 4.9          |
| h) leaving food supplies on the picnic table overnight                             | 1.2        | .68                | 2.7                  | .92                | 1.2          |
| i) letting a dog roam through the campground by himself                            | 1.2        | .87                | 3.0                  | .95                | 1.2          |
| j) firing a gun at a bear which is scavenging in the campground                    |            |                    |                      |                    |              |
| k) teaching children how to dig a firepit and light a fire in it                   | 1.5        | 1.1                | 2.9                  | 1.0                | 3.6          |



TABLE 66 CONTINUED

| <u>Items</u>                                                        | <u>Management</u> |                               | <u>Managements'</u><br><u>Campers</u> |                               | <u>Campers</u> |                               |
|---------------------------------------------------------------------|-------------------|-------------------------------|---------------------------------------|-------------------------------|----------------|-------------------------------|
|                                                                     | <u>Mean</u>       | <u>Standard<br/>Deviation</u> | <u>Mean</u>                           | <u>Standard<br/>Deviation</u> | <u>Mean</u>    | <u>Standard<br/>Deviation</u> |
| l) sleeping in a kitchen shelter<br>overnight                       | 1.7               | 1.2                           | 2.9                                   | .93                           | 2.2            |                               |
| m) digging a trench around a tent<br>site to drain off water        | 2.0               | 1.1                           | 3.5                                   | 1.2                           | 3.4            |                               |
| n) draining waste from a trailer<br>directly onto the ground nearby | 1.5               | 1.3                           | 2.8                                   | 1.4                           | 1.3            |                               |



responding to the item. The averages range from one (always wrong) through three (neutral to five (always right)). In general managers felt that campers would not be so disapproving towards the listed activity situations. There were five legalistic acts included in the series. Most managers did not approve of becoming intoxicated or firing a gun at a scavenging bear. They did not feel that campers would approve of the former, but about half of the managers felt that campers would approve of the latter in certain circumstances. Very few of the campers interviewed approved of firing a gun at a bear in a campground and many were aware that firearms had to be sealed while in the park. Three-quarters of managers thought that teaching children to dig firepits and light fires in them was always wrong and 66.7% of them felt that sleeping in a kitchen shelter overnight was always wrong. On both of these activities most managers felt that campers would approve of them in certain circumstances. About two-thirds of the camper respondents thought that teaching children to dig firepits was right and only one-quarter felt that it was always wrong. Proportionately more managers responded that campers would not approve



of this activity than did campers. Management estimations of camper approval for sleeping in kitchen shelters was close to the camper response pattern except that managers slightly overestimated the amount of camper approval. Although all managers did not disapprove of leaving a campsite after the check-out time as a whole their average approval score was lower than their estimation of camper response. Camper responses to this item were closer to the management viewpoint than to management's estimation of their view.

Of the four vandalistic activities most managers did not approve of picking leaves and flowers to take home or draining waste from a trailer onto the ground. For these two activities most managers felt that campers would approve if certain circumstances prevailed. The interviewed campers indicated that they were not as approving of these activities as managers felt they would be. Campers were slightly more approving of picking leaves and flowers than the managers, but were less approving than managers were of spilling trailer waste on the ground. A little over half of the managers felt that throwing used dishwater into shrubs was always wrong and most of them thought that campers would approve of this. Although their estimation of the proportion of campers approving of this activity was incorrect campers were more approving as a group of this activity than managers. The proportions of managers feeling that campers would approve of digging a trench around a tent site was the same as that of





campers who felt that this was appropriate under certain circumstances, such as heavy rain. As may have been expected most managers were not as approving of this as were campers.

Most management personnel agreed that leaving food supplies out and letting dogs roam through the campground were activities which were always wrong. Most camper respondents agreed with the management viewpoint, even though many managers felt that they would not. Proportionately more managers disapproved of taking chopped firewood from an empty site than campers and management estimations of camper response to this activity were close to the responses given in the camper interview. Surprisingly enough the mean responses to the two nondepreciative acts were higher for campers than they were for managers (i.e. more approving), even though most managers felt that campers would not be so approving.

Although the above is a simplified overview of the response patterns of managers and campers it serves to point out that many managers tended to overestimate the amount of approval which campers would accord to the various items included in the series. The distribution of management and camper approval scores (see Table 67) is a further indication that this is the case. Managers themselves tended to have very low approval scores based on the nine illegal items used in the scale, but felt that campers would be more approving of the same illegal activities. Although the standard deviation was fairly large the camper's average (mean) approval



score as estimated by management personnel was 23.9. When the average score from the campers' approval score distribution is compared with the management scores and their

TABLE 67

## DISTRIBUTION OF MANAGEMENT AND CAMPER APPROVAL SCORES

| Approval<br>Scores    | Management's<br>Distribution | Management's Camper<br>Distribution | Campers'<br>Distribution |
|-----------------------|------------------------------|-------------------------------------|--------------------------|
| 9                     | 3(14.3)                      |                                     | 5( 3.3)                  |
| 10                    | 3(14.3)                      |                                     | 4( 2.7)                  |
| 11                    | 5(23.8)                      |                                     | 3( 2.0)                  |
| 12                    | 2( 9.5)                      |                                     | 3( 2.0)                  |
| 13                    | 3(14.3)                      |                                     | 8( 5.3)                  |
| 14                    |                              | 1( 4.8)                             | 5( 3.3)                  |
| 15                    | 1( 4.8)                      | 1( 4.8)                             | 10( 6.7)                 |
| 16                    |                              |                                     | 15(10.0)                 |
| 17                    | 1( 4.8)                      |                                     | 16(10.7)                 |
| 18                    | 2( 9.5)                      | 1( 4.8)                             | 14( 9.3)                 |
| 19                    |                              |                                     | 10( 6.7)                 |
| 20                    |                              | 1( 4.8)                             | 21(14.0)                 |
| 21                    |                              |                                     | 5( 3.3)                  |
| 22                    |                              | 1( 4.8)                             | 10( 6.7)                 |
| 23                    |                              | 4(19.0)                             | 8( 5.3)                  |
| 24                    |                              | 2( 9.5)                             | 8( 5.3)                  |
| 25                    |                              |                                     | 1( 0.7)                  |
| 26                    |                              | 1( 4.8)                             | 1( 0.7)                  |
| 27                    |                              |                                     | 1( 0.7)                  |
| 28                    |                              | 2( 9.5)                             | 1( 0.7)                  |
| 29                    |                              |                                     |                          |
| 30                    |                              | 2( 9.5)                             |                          |
| 31                    |                              | 1( 4.8)                             |                          |
| 32                    |                              | 1( 4.8)                             |                          |
| 33                    |                              | 1( 4.8)                             | 1( 0.7)                  |
| 34                    |                              | 1( 4.8)                             |                          |
| 35                    | 1( 4.8)                      |                                     |                          |
| ⋮                     |                              |                                     |                          |
| 45                    |                              |                                     |                          |
| Mean                  | 13.24                        | 23.86                               | 17.95                    |
| Standard<br>Deviation | 5.7                          | 7.81                                |                          |



estimated camper score it becomes apparent that managers are much less approving of the depreciative acts in the scale but that many of them tended to overestimate the extent to which campers would approve of the same depreciative behavior (see Table 68). Only one manager (a warden who qualified most of his statements by remarking on the lack of facilities) scored over twenty-three, but 71.5% of them thought that campers would score between twenty-three and thirty-five. Of the interviewed campers only 14.1% of them were actually in this high score range. Again this rather gross over-estimation of campers approval of certain types of depreciative behavior may have been related to the personal experiences

TABLE 68

PERCENTAGE DISTRIBUTION OF HIGH AND LOW APPROVAL SCORES  
FOR MANAGERS AND CAMPERS

| <u>Score<br/>Range</u> | <u>Management</u> | <u>Management's Campers</u> | <u>Campers</u> |
|------------------------|-------------------|-----------------------------|----------------|
| 9-18 (low)             | 95.3%             | 14.4%                       | 55.3%          |
| 19-33 (high)           | 4.8               | 85.6%                       | 44.7%          |
| Totals                 | 100.1             | 100.0                       | 100.0          |
| 23-33 (highest)        | 4.8%              | 71.5%                       | 14.1%          |

of the managers themselves rather than to their overall knowledge of the camping public's attitudes. Management orientation towards the natural environment may restrict the activities which they feel are appropriate in a campground. When they are exposed to campground behavior which does not agree with their more traditional approach to camping they may assume therefore than the average camper holds





a tolerant and approving attitude towards certain types of depreciative behavior. Whether or not the above is even part of the explanation can only be guessed at this time.

### The Action Component of Attitude

The last series of items used in the management questionnaire were concerned with the potential reactions which might be taken if various types of depreciative behavior were seen taking place in a campground. The low score of one means that the respondents did not wish to become involved at all and with each increase of one the type of involvement to which the respondent ascribed became more personal till a high of five indicated that the person would try to directly stop the activity. About half of the managers indicated that they would not become personally involved if they saw an adult camper verbally threatening another camper and tended to feel that campers would become even less involved (see Table 69). Among the interviewed campers the average involvement score was higher than the managers' estimation but not as high as the manager's personal average. The figures in Table 63 are based on the average scores for each item and clearly indicate that management estimations and camper responses are not often the same. The same situation reported for the first item occurred when managers considered the next activity concerned with someone stealing another camper's equipment. Although some managers felt that campers would not





TABLE 69

AVERAGE MANAGEMENT AND CAMPER RESPONSES TO INVOLVEMENT SCORE ITEMS

| <u>Involvement Items</u>                                                            | <u>Management</u> |     | <u>Management's</u> |     |
|-------------------------------------------------------------------------------------|-------------------|-----|---------------------|-----|
|                                                                                     | <u>Camper</u>     |     | <u>Camper</u>       |     |
| a) an adult camper verbally threatening another camper                              | 2.7               | 1.4 | 2.2                 | 2.2 |
| b) a child or group of children damaging a park facility                            | 4.5               | 2.6 | 4.0                 | 4.0 |
| c) an adult camper littering in the campground                                      | 3.9               | 1.5 | 2.6                 | 2.6 |
| d) a teenage camper carving his initials in a tree or in some way damaging the tree | 4.1               | 1.6 | 3.3                 | 3.3 |
| e) someone obviously stealing another camper's equipment                            | 3.7               | 2.9 | 3.6                 | 3.6 |
| f) a group of older youths making excessive noise and drinking after 11:00 p.m.     | 3.5               | 2.5 | 2.8                 | 2.8 |



become as involved if they saw this activity as the manager, the campers themselves had an average score very close to to that of the managers. About 85% of the managers felt that they would get personally involved if they saw a camper littering, but only 9.5% thought that campers would do likewise. This estimation is low when one considers that 43% of the interviewed campers felt that they would either say something to the person or stop the activity. In both of the vandalistic acts (items 'b' and 'd') about 80% of the managers thought that they would become personally involved in these activities and although their proportions were low many managers correctly assessed that campers would be more likely to become involved when children were the offenders rather than a teenager. Concerning the only nuisance act (item 'f') proportionately more managers thought they would become personally involved than interviewed campers. Management estimations of camper response to a group of older youths making excessive noise and drinking after 11:00 p.m. were very close to the distribution of camper responses.

From the above discussion it may seem clear that when all of the scores were combined managers had a higher average involvement score than campers, but that managers estimated camper scores to be much lower than those found in this study. Only about 15% of the managers had involvement scores of eighteen (the campers' average score) or less while half of the interviewed campers had scores in this range (see Table 70). Of the managers, 95% of them thought that



TABLE 70

## MANAGEMENT AND CAMPER DISTRIBUTIONS OF INVOLVEMENT SCORES

| <u>Involvement<br/>Scores</u>           | <u>Management<br/>Distribution</u> | <u>Management's Camper<br/>Distribution</u> | <u>Campers'<br/>Distribution</u> |
|-----------------------------------------|------------------------------------|---------------------------------------------|----------------------------------|
| 6                                       |                                    |                                             |                                  |
| 7                                       |                                    |                                             |                                  |
| 8                                       |                                    | 2 (10.0)                                    | 1 ( 0.7)                         |
| 9                                       | 1 ( 5.0)                           | 1 ( 5.0)                                    | 2 ( 1.3)                         |
| 10                                      |                                    | 1 ( 5.0)                                    | 1 ( 0.7)                         |
| 11                                      |                                    | 3 (15.0)                                    | 1 ( 0.7)                         |
| 12                                      |                                    | 3 (15.0)                                    | 3 ( 2.0)                         |
| 13                                      |                                    | 1 ( 5.0)                                    | 3 ( 2.0)                         |
| 14                                      |                                    | 1 ( 5.0)                                    | 7 ( 4.7)                         |
| 15                                      | 1 ( 5.0)                           | 2 (10.0)                                    | 7 ( 4.7)                         |
| 16                                      | 1 ( 5.0)                           | 5 (25.0)                                    | 11 ( 7.3)                        |
| 17                                      |                                    |                                             | 16 (10.7)                        |
| 18                                      |                                    |                                             | 14 ( 9.3)                        |
| 19                                      |                                    |                                             | 8 ( 5.3)                         |
| 20                                      |                                    |                                             | 14 ( 9.3)                        |
| 21                                      | 1 ( 5.0)                           |                                             | 15 (10.0)                        |
| 22                                      | 3 (15.0)                           | 1 ( 5.0)                                    | 11 ( 7.3)                        |
| 23                                      | 4 (20.0)                           |                                             | 10 ( 6.7)                        |
| 24                                      | 2 (10.0)                           |                                             | 6 ( 4.0)                         |
| 25                                      | 1 ( 5.0)                           |                                             | 9 ( 6.0)                         |
| 26                                      |                                    |                                             | 4 ( 2.7)                         |
| 27                                      |                                    |                                             | 3 ( 2.0)                         |
| 28                                      | 3 (15.0)                           |                                             | 3 ( 2.0)                         |
| 29                                      | 1 (10.0)                           |                                             | 1 ( 0.7)                         |
| 30                                      | 1 ( 5.0)                           |                                             |                                  |
| Average (mean)                          | 22.10                              | 12.52                                       | 18.40                            |
| Percentage<br>between scores<br>of 6-18 | 15.0%                              | 95.0%                                       | 49.7%                            |



campers would obtain scores of sixteen and below. In actuality the involvement scores of managers and campers were fairly close, much closer than management's estimations of camper involvement.

### The Manager and Carrying Capacity

When managers were asked whether or not they thought that most of the campgrounds in Jasper National Park were overcrowded during most of the summer months 90% of them felt they were. Those who responded positively to this question were asked what types of solutions they saw to the overcrowding problem (see Appendix IX, Table 71). Most of the suggestions dealt with restricting the number of campers allowed in the national park by such means as: 1) having large campgrounds around the park boundaries, 2) a camper reservation system, 3) only allowing day use within the national parks, 4) charging campers higher fees at the park entrance, and 5) less advertising of the national parks. Of the twenty-nine suggestions made of various solutions only five of them involved increasing the facilities within the national parks. It was evident from the number and types of solutions mentioned that many managers were in favor of greater emphasis being placed on the natural preservation aspects of the national parks. Perhaps from the vantage point of working within a national park the personnel there are able to see more clearly the problems which overcrowding can cause,





both for the quality of the campers' experience and for the quality of the natural environment. These views of management personnel are important when considering how much stress one should place on the natural ecological limits of any national park carrying capacity.

Many managers also felt that much more could be done to increase the campers' knowledge of national park rules and regulations. It was noted previously that about 67% of the managers felt that campers were not familiar with the rules and regulations which applied in Canadian national parks. From the results of the camper interview it would appear that most were aware of the basic rules and regulations. Perhaps some of the suggestions made by managers (Appendix IX, Table 72) concerning various ways to help make campers more aware of the rules could also apply to making them more aware of national park purposes and proper behavior while camping. Better education both within and outside of the parks were the types of methods for making campers more aware of the rules which received the most mentions from management personnel (17 out of 23) while stricter rule enforcement received the second largest number of mentions (5 out of 23). One manager felt that campers should be required to pass a camping exam before they are given a permit allowing them to camp in a national park, which is a method that has some novel merits. From these comments it did appear that some managers advocated greater efforts to make the camper more aware of national park rules and regulations as well as



restrict the actual number of campers allowed in the park. It might be even more advisable to make the camper more aware of the problems for which he is responsible as well as the other purposes besides his personal pleasure for which Canada's national parks were originally set aside.

### Some Conclusions Regarding the Management Viewpoint

It is believed that the results from the management questionnaire revealed some interesting trends, but the small size of the sample requires that some caution be exercised when making conclusions from these results. Although the sample was biased in favor of campground attendants it was felt that their responses were of great value due to their close contact throughout the camping season (1972) with the undeveloped automobile campgrounds. Managers did tend to over or under-estimate camper responses compared to those which were obtained from the camper interview, but some estimations were very close to camper responses. Some managers who did not answer the questionnaire felt that they did not have enough knowledge of undeveloped automobile campground campers or felt that they could not clearly distinguish between the undeveloped and developed campground camper. It is realized that this distinction may be considered a rather hazy one, but at least half of the sample had almost exclusive contact with undeveloped campgrounds and it was felt necessary to attempt at least some distinction.



When managers were asked to assess characteristics of the camper they tended to underestimate the experience of the camper (in years and days per year). About half of the managers felt that campers who selected undeveloped campgrounds did so because they preferred them which is a little under the proportion of campers who responded that this was the case. Many managers felt that campers would prefer a permanent attendant in the campground, but interviewed campers actually revealed attendant preferences close to those of management with the exception of a greater proportion of campers preferring the mobile attendant and managers feeling that the type depended on the campground size. In general managers underemphasized the extent to which campers felt that they should help control the behavior of other campers, but were correct in feeling that a norm of noninvolvement would prevail among campers unless the circumstances were severe.

Most managers thought that the undeveloped automobile campgrounds in Jasper National Park did have problems with camper behavior much of which was natural environment damage. Observation of depreciative behavior would indicate that managers do perceive the extent to which many of the undeveloped campgrounds are subject to camper behavior problems. Although managers were correct in their identification of the types of problems which campers would mention, proportionately more managers than camper respondents felt that the average camper





would recognize the problems. A similar result was obtained when managers were asked to suggest management changes and to assess camper views on campground changes. Contrary to what the majority of managers felt campers would say very few interviewed campers could suggest any management changes which they would have liked to have seen in the various campgrounds. Exactly why many managers feel that campers do perceive behavior problems when it appears that they do not is rather an unusual finding when one considers management's overall estimation of camper attitudes towards depreciative behavior.

Management's assessment of the camper's beliefs concerning types of depreciative behavior is more clearly understood when the results from the two series of items are considered together. Managers generally felt that campers were not aware of the existence of certain rules and regulations which applied to Canadian National Parks campgrounds. When managers were asked directly about two-thirds of them did not feel that campers were familiar with the rules, regulations, and laws. Perhaps as a result of this assumption many managers also felt that campers would be fairly approving of certain types of depreciative behavior under the right circumstances. Managers themselves were, of course, familiar with the rules in general and were not very approving of illegal depreciative behavior. A large majority of managers (85.6%) felt that campers would be bothered by five out of





eight types of depreciative acts which mainly consisted of socially detrimental activities rather than environmentally damaging ones. Managers scored fairly high on the bother scale and appeared to be fairly sensitive to depreciative behavior especially that which was detrimental to the natural environment. In conjunction with the rather high estimates of camper approval scores most managers felt that campers would not tend to become personally involved if they observed depreciative behavior, while they themselves would become more involved. This appraisal of camper attitudes towards depreciative behavior did not match too closely with that obtained from campers themselves. Campers' approval and involvement scores were closer to those of managers than they were to the management estimations of their scores. Although the bother score estimation was close to that of campers in that the number of items which would bother the camper were the same, the managers were inclined to underestimate the concern of campers for environmentally oriented depreciative behavior. Campers also appeared to be much more aware of the rules and regulations than management personnel thought they would be aware.

These discrepancies between management estimations of camper viewpoints and the campers' own views may be due to a combination of things. Many managers not only feel that environment protection should be emphasized in the Canadian National Parks, but are very sensitive to camping behavior



problems which endanger or damage the natural environment within the parks. Many of the managers in the sample have had an opportunity to observe the depreciative behavior which takes place in campgrounds not only throughout the camping season, but over a span of years. They are more aware of the cumulative effect which it can have and in general are probably the most concerned about the environmental damage which takes place. It would seem logical that they would assess camper attitudes and opinions on the basis of their past observations as well as their own feelings towards depreciative behavior. It seems clear from the observation research that depreciative behavior does take place and that managers are aware of at least part of it and the effects it may have.

Management personnel base their appraisal of campers' opinions and attitudes on what they see rather than on a knowledge of how the camper actually feels. The camper verbally expresses attitudes and opinions which indicate that although he is not aware of depreciative behavior in general, he would be bothered, would not approve, and would get involved if he were aware. Camper viewpoints are very similar to those of management on most counts except natural environment damage and the overall awareness of occurring depreciative behavior. There are good indications here that a camper's behavior could be brought more in line with his attitudes if he were made aware of the problems which certain types of



behavior create. Managers need to realize that their own opinions concerning campers affect how successfully they are able to deal with behavior problems and that campers may be more amenable to behavior change if they had a clearer understanding of the reasons behind certain rules and regulations which govern their behavior.



## CHAPTER VIII

### DEPRECIATIVE BEHAVIOR: PROBLEMS AND SOLUTIONS

Having arrived at the end of a rather lengthy trail what remains to be done is to assess the results of this study and place them into a useful perspective. The work done here has added a new light to some of the problems facing Canadian National Parks and gave some hint as to further possible directions which future research may take.

#### Major Findings

Concerning the study objectives outlined in chapter one it was felt that the major findings of this study were of significant value in clarifying certain points about depreciative behavior in undeveloped national park campgrounds. Behavior which is contrary to the laws, regulations, and rules of Canadian National Parks (depreciative behavior) did occur in the three undeveloped automobile campgrounds studied in Jasper National Park. No specific type of camper was found to be responsible for a greater proportion of depreciative behavior involved, although campers using tents were found to have greater detrimental effects on the natural environment than those campers using wheeled recreation vehicles. Campground rule violations were found to occur





the most often with nuisance acts and vandalistic acts second and third respectively. Although many of the acts were directed at people (about one-third) nearly one-fourth of the acts victimized the natural environment. And although the total numbers of acts observed were not greater at the campgrounds closer to a metropolitan center, if only acts committed by campers (omitting those committed by day users) were considered then it may be considered a possibility that campgrounds within easy access of large metropolitan centers (or a fairly large camping market) may have greater problems with depreciative behavior. Local residents from Alberta and British Columbia were found to have participated in depreciative acts in proportions greater than residents from other areas of Canada and the United States. As more local residents (primarily Albertans) use the campgrounds closer to the east gate of Jasper National Park and proportionately more camper depreciative behavior was observed in these campgrounds then it is possible that proximity to urban areas could be a factor affecting depreciative behavior in a campground.

One variable which was found to have very little effect on the number of depreciative acts observed was that of rule postings. Time and again campers were seen to stop in front of the campground entrance and then commit offences which were in contradiction to posted sign (especially picnicing and stone ring fires). The effects of posting lists



of rules and regulations in the campgrounds under study could very well have been subtle since the research procedures were really only designed to measure any gross effects.

Campground design was found to be a primary factor affecting the types of depreciative behavior which took place. Jonas Creek campground with waste disposal areas, asphalt road, and log barriers was ideally designed for transient recreation vehicle camping and had fewer natural environment damage acts than either of the other two campgrounds. The actual extent of depreciative behavior in these campgrounds cannot be known for sure at this time as: 1) there are no comparison figures available, and 2) the research techniques for observation were not designed to record all depreciative behavior but only to give an indication of the types of acts being committed and the relative proportions.

It was thought that campers would generally not be able to make logical connections between their own behavior and their opinions and attitudes towards depreciative behavior. Results from the camper interview would appear to support this idea. Depreciative behavior was shown to take place and that no particular type of camper or group of campers was responsible, yet most interviewed campers did not feel that any of the three campgrounds had problems with camper behavior. This response could be better understood if it had also been found that most campers were sensitive or disapproving of depreciative behavior. In general, however,



this was not found to have been the case.

As far as a camper's verbal behavior was concerned:

1) he was aware of primary rules and regulations which applied in campgrounds, 2) he was not tolerant of all types of depreciative behavior especially if it was behavior which directly affected his camping experience or his sense of values, 3) he generally did not highly approve of certain types of illegal activity, and 4) he expressed fairly good intentions if he were to observe depreciative behavior of a more serious nature, but generally seemed to prefer not getting personally involved.

The expressed attitudes of campers seemingly contradicted their actual behavior. It must be noted, however, that many campers felt that some depreciative activities were acceptable if the circumstances were such that they could not be avoided. Exactly how this occurs and what a camper considers extenuating circumstances would be very interesting areas for further research. Although observed behavior supports this last statement it generally did not seem to support the attitudes which the camper expressed. This inconsistency may be partially explained by some of the campers' expressed opinions which indicated that he was not aware of the problems which his behavior created and that he was generally satisfied with the social environment which prevailed in the campgrounds. Many of today's campers appear to have adjusted very well to the mounting pressure of





overcrowding. It may be that just as the activities which are considered in keeping with expressed traditional camping values have changed that activities in keeping with his expressed behavior ideals have also changed. However, it was felt that in many cases the interviewed transient camper in the undeveloped campgrounds of Jasper National Park was not aware of the depreciative behavior which occurred around him or of the problems which his own behavior may have caused.

As far as the socially depreciative behavior was concerned, although it did occur a greater number of times compared to other types of behavior, it did not appear to have substantial effects on the experience of the transient camper. To some degree those campers who travelled furthest to the area, older campers, and those preferring the remote style of camping were more sensitive to all types of depreciative behavior, but no clear indication was found that any specific group of campers who frequented the undeveloped campgrounds exhibited greater sensitivities. It must be remembered that campgrounds in the Canadian National Parks attract a wide variety of campers from all over North America and that these undeveloped campgrounds are not typical of most undeveloped automobile campgrounds since they are not places where campers would usually spend more than a day or two (even though there were some exceptions). What was of greater importance than socially depreciative behavior was the proportion of depreciative behavior occurring in the three camp-





grounds which affected the natural environment, behavior which was only aggravated by the high degree of overuse and crowding in these campgrounds. Here again many campers were not aware that their behavior was responsible for natural environment damage, even though they often did not approve of it. In a national park this is especially unfortunate, and in a heavily used park such as Jasper National Park it is important to realize that many campers are not aware of the damage that they cause.

In Jasper National Park it did not seem that managers were aware of this relationship. From the result of the questionnaire directed at park managers who had contact with campers in undeveloped campgrounds it appeared that managers viewed campers in the light of their (i.e. managers') own values and experiences. Many managers had tended to reverse the campers' attitudes and opinions so that they were in line with their behavior as it was observed. As expected managers themselves were highly conscious of the behavior problems occurring in undeveloped campgrounds and seemed to feel that much needed to be done to correct the problems. Almost all managers thought that the campgrounds in Jasper National Park were overcrowded during most of the summer months and many expressed desires that more attention would be paid to the preservation of the park by such means as limiting the numbers of campers who would be allowed within the park or not allowing camping within the central areas of the park. Most



managers were not tolerant of depreciative behavior, highly disapproved of illegal activities, and felt that they would become personally involved if they were to observe serious depreciative behavior. When assessing campers in undeveloped campgrounds managers thought that campers would be aware of behavior problems in the campgrounds and express some degree of dissatisfaction with the social conditions there. Their evaluations of camper attitudes were such that attitudes towards depreciative behavior were perceived to be fairly lenient. Most managers felt that campers were: 1) mainly bothered by socially depreciative behavior, 2) quite approving of various illegal campground activities, 3) unfamiliar with the existence of certain primary campground regulations, and 4) unlikely to become personally involved if they saw depreciative behavior of a serious nature. When one considers the inconsistency between the campers' awareness of behavior problems and his attitudes towards depreciative behavior coupled with the depreciative behavior observed it seems logical that another individual would tend to assess an attitude or opinion on the basis of his observed behavior and then assume that they would complement each other. Another factor which was noted by Clark, Hendee, and Campbell (1971) in the northwestern United States study was that managers tended to evaluate the campers views in light of their own views concerning campers in general. Actually managers in Jasper National Park seemed to feel that campers



would be more concerned about socially depreciative behavior and that environmental damage would not bother them a great deal. In some specific instances this assumption was borne out by the expressed views of the interviewed campers, but overall more campers expressed concern over environmental damage than most managers would have anticipated.

It should be mentioned at this point that it is possible that in many instances campers were expressing behavioral intentions which they thought they should give rather than those which were closer to what they actually would do in the same situations. It was mentioned previously that many campers were aware that it was their attitudes and opinions towards improper behavior which were being tested. The nature of depreciative behavior is such that it is very difficult to obtain totally truthful responses to questions which deal with this topic. The concern which campers expressed towards depreciative behavior may in fact have been stronger than it was in reality. If this was in fact the case then their attitudes and opinions were closer to their behavior and the managers' assessments of them. It is probably more likely that campers' attitudes towards depreciative behavior are between their verbal expressions on the interview and the managers assessment of their attitudes. Often a camper seemed to know that certain activities were contrary to park regulations (such as freeing pets in the campground) and expressed such views on the camper interview





questions, but felt that under certain circumstances (usually those which affected him personally) activities contrary to park regulations were perfectly acceptable. It is possible that a camper could hold two sets of attitudes, one for behavior other than his own, and one for his own behavior.

### Undeveloped Campgrounds

As has been mentioned previously the undeveloped automobile campground used in this study could not be considered typical of undeveloped campgrounds where campers spend more than two or three days per visit. It was felt that the findings from this study supplemented and basically agreed with those from the northwestern United States study in developed and serviced campgrounds, but that some of the differences were apparent.

The campers in the Jasper National Park undeveloped campgrounds appeared to be somewhat different from those in developed and serviced campgrounds in that the proportion of tent campers was fairly high especially at the beginning of the camping season. Since this study in the three campgrounds was so short it was difficult to determine what type of recreational activities prevailed and whether or not the campers preferred being close to other individuals or being by themselves. Subjectively it was felt that as a whole the campers were drawn primarily from the modern camping market which prefers the developed and serviced campgrounds even





though a large proportion of the interviewed campers indicated that they preferred undeveloped campgrounds. Some of the campers appeared to be in transition from a remote style due to circumstances or family age patterns. In order to determine the validity of Figure 7 shown in chapter two more research needs to be conducted on camper activity patterns and preferences in undeveloped campgrounds which are not transient in nature.

In the undeveloped campgrounds which are so frequently used in Canada's mountain national parks it appears that campers coming greater distances are slightly more sensitive to depreciative behavior and do not seem to engage in depreciative behavior in proportion to their numbers. It may be that distance has a tendency to increase the expectations that a camper builds up about his trip destination or that a different type of camper is prone to travelling greater distances, a type who may have slightly different opinions and attitudes from those who travel shorter distances. Another factor which may be related to this sensitivity could be the type of facilities available to a person from a greater distance, in other words his experience background may have led him to have increased awareness of campground behavior problems. This distance factor did not apply in all cases nor in all parts of the interview response patterns, but there were some indications that distance may have been a factor of some importance. Here, then, is another area in which



more research could add to the understanding of attitudes and opinions towards depreciative behavior.

### Carrying Capacity and Management Implications

The major findings of this study should be of interest to those responsible for the management of Canada's national parks and to those who may be responsible in the future for the establishment of national park carrying capacity limits. The ultimate decision of which carrying capacity limits to use in national parks will require some very basic changes in the philosophy of national park policy. Originally Canada's national parks were set aside for recreational (intertwined with economic reasons) and preservational purposes. Currently, more emphasis is being placed on the recreational aspects of Canada's national parks, even though verbal reassurances have come from the higher levels of the Canadian National Park Service that the preservation aspects of national parks are equally important.

It has been pointed out in this study that depreciative behavior does occur in the undeveloped campgrounds in Jasper National Park. The primary focus of that behavior was people, but the natural environment also received a certain amount of abuse throughout the summer months. The sheer numbers of people who use these campgrounds create inevitable changes, just by being there, but added to these changes are



the other activities campers engage in which have the potential to decrease the quality of the campers' experience. A policy allowing unchecked numbers of campers into a national park campground, especially of the unsupervised type, can only lead to further increases in depreciative behavior. The posting of rules or the use of signs does not appear to prevent a great deal of depreciative behavior, but it is possible to modify the effects of depreciative behavior by altering the natural environment in such a manner that it can support increased numbers of campers without subsequent increases in environmental damage. The design of Jonas Creek with its asphalt road and log barriers to prevent cars from parking on vegetation clearly had an effect on the amount of natural environment damage which was observed in that campground. Other possible modifications are the use of planted shrub barriers, the supplying of waste water disposal facilities, and gravel areas or improved tent pads on which tents can be erected. These types of modifications are far preferred to the closing of overused campgrounds which may take years to recover.

From the results of the camper interview it seems that campers are not aware of the depreciative behavior which is occurring in the campgrounds, even though they seem to hold attitudes which are disapproving of depreciative behavior in general. The transient camper who used the undeveloped campgrounds in Jasper National Park appear to have rather





high mental capacity limits. The majority of the interviewed campers were not greatly affected by the reduced quality of the social and natural environment which should follow the increasing numbers of campers using the now limited facilities in Jasper National Park. The camper's verbally expressed mental (or social) carrying capacity limits indicate that he has some tolerance to depreciative behavior and overcrowding, but his behavior is what indicates this the most clearly. Managers basically recognized this tolerance of the camper to depreciative behavior through their estimations of camper attitudes and opinions. Managers tended to equate the camper's behavior as they observed it and the camper's attitudes and opinions towards that behavior. Management estimations of camper tolerance may both have been exaggerated in either direction (too much and too less tolerance) and the true camper tolerance may lie somewhere in between. It can not be doubted that in many ways the camper's mental carrying capacity far exceeds the coping ability of the natural environment. The changing of national park carrying capacity limits in favor of more people either by the addition of new facilities or modification of the old ones will not solve the basic problem of camper tolerance to crowding and depreciative behavior. The implementation of these higher carrying capacity limits by facility modification would be a much easier task than deciding that parks are for more than just satisfying the demands of current recreationists.





The Canadian National Park Policy places great stress on the activity of camping, a stress placed on the activity because it is assumed that campers are looking for the quiet places and the natural environment of Canada. Little emphasis has been placed on a real understanding of that experience in today's urban world. Many of today's campers may espouse the traditional camping values of getting close to nature, but they are emphasizing even more the escape values of camping. They want to get away from the city the routine of daily life, yet they feel that urban type activities are suitable in a campground. The transient camper comes into Rocky River, Jonas Creek, or Mt. Kerkeslin after a day of viewing Jasper National Park primarily from the window of an automobile and then may leave his site once for a twenty minute walk to the creek or river. To judge the motives of these campers or their campground activities is not the purpose of this thesis, but it must be asked if the average camper is primarily seeking a recreational activity that gives him a change of scene. Does the camper's experience in a national park in any way give him an increased appreciation for nature and the natural balances of which he is a very vital part? If national parks are to be the last remaining islands of a once natural Canada and if they have much to offer in teaching Canadians about natural events and relationships then the establishment of high carrying capacity limits which can enable the parks to handle more recreationists is



not the way to use the parks to their greatest potential benefit. It really must be decided that the purpose of national park camping is not to provide a solely recreational experience which teaches the individual to be tolerant of overcrowding, depreciative behavior, and urban type activities in national parks.

In order to use the Canadian National Parks to their greatest advantage, such as their educational role, then more attention must be paid to the preservation aspects of the national park policy. This would entail emphasizing the quality of the camping experience and the camping environment by placing greater stress on the natural limits of an area within a national park and on changing the mental (social) carrying capacity limits of the recreationist. The results of this study would indicate that there is a potential for for changing the depreciative behavior of the camper by bringing his behavior more in line with his expressed attitudes. Managers need to understand that campers are not as immune to and approving of depreciative behavior as the managers may think, it is just that campers need to be made more aware of the problems which depreciative behavior cause. Of course, this is only part of changing the mental capacity limits of campers because in essence the camper's awareness of the purpose of a national park needs to be changed if lower carrying capacity limits and higher quality camping experiences are to be implemented within national parks. What will be



required more than anything else is communication and not just during the individual's visit to a national park. The National and Provincial Parks Association of Canada and other organizations are part of the start towards an increased awareness of Canadian national park values other than those of a purely recreational nature.

In the short run changes which restrict the number of campers allowed within a national park will be necessary. It may be too late to alter many of the modifications which have taken place in the mountain national parks of Canada since they are located astride the major transcontinental routeways, but to continue the present course of overuse is futile and may only bring about the complete destruction of the areas now suitable for fairly high levels of human use. The short run solutions which offer the greatest potential benefits are those which limit the number of campers in the park to the number of sites available. This can be done by either reservation systems or by a telecommunication system with the park gates in conjunction with large campgrounds at the park entrances which can accommodate those who could not camp within the park itself. While these changes are an attempt to alleviate part of the immediate problems other changes will need to be made, such as less reliance on the camping facilities of national parks as a key recreational resource of Canada and more education within the parks themselves. It seems entirely possible that campers can be made





more aware of the problems which depreciative behavior causes and that it is the camper who benefits or loses by his own behavior. Education such as this has the potential to affect depreciative behavior in other areas as well as in national parks.

It is possible that both objectives of the original Canadian national park policy can work together. A national park does not need to be preserved absolutely untouched for the benefit of future generations if care is taken to use the parks wisely today. The national parks should not be regarded solely as pleasure grounds in which certain recreational activities are carried out. The parks are not just backdrops for recreational activities which could be carried out anywhere, but they are for people to use in a productive educational manner. Using the parks for the benefit, education, and enjoyment of Canadians is a challenge which calls for more imagination and ingenuity than has been used since the parks were first established. The problems of North America are many and those in urban places are especially serious. A new and fresh perceptual outlook on man's relationship with the natural environment might be part of the solution to pressing problems, in which case national parks could be of great importance. Perhaps the true purpose of the Canadian national parks,

. . . lies in the hope that the park visitor can be actively stimulated, by the immediacy of his surroundings and the substance of the interpretive programs, to





perceive and treasure the natural and historic processes through which the land and all living things have achieved their form and by which they maintain their dependent existence. (Everhart, 1972:241).

National parks are for people, but for special reasons, to help them understand themselves and the world in which they live. National parks cannot be all things to all people, but by restricting their use for specific educational purposes their contribution to the wellbeing of man can be greatly enhanced.

### Some Questions and No Answers

In general it was felt throughout the course of this study that more questions were raised than answers produced. The nature of the study was primarily exploratory and although exploratory studies often reveal interesting insights into the problems with which they deal they more often reveal trends and test techniques. Observation, interview, and questionnaire when used in conjunction require more than one person unless the one person has a great deal of time and/or a situation of suitable size. In this case the data gathered could not be analyzed in great depth due to time and as it was more data gathered from campers and managers would have increased the value of this study. It should be stressed that in the past geographers as well as other social scientists have placed great stress on the questionnaire and interview techniques for gathering attitude and opinion information.



It was felt that the value of observation to this study was substantial as it allowed for interesting comparisons between verbal and actual behavior. The value of observation to other geographical research should not be overlooked if valid comparisons are to be made between questionnaire and interview data and the behavioral world.

The questions which were raised are many. Of primary importance were questions which dealt with the national park visitor's conception of a national park and what it meant to him. Is the nature of a recreationist's visit to a national park the same as it is to an area of similar surroundings just outside of a national park? What are the most effective techniques for changing or modifying the current view which seems to be held by Canadians that national parks are primarily areas where one carries out various recreational activities? Are there programs which can be implemented immediately to increase the awareness of the camper towards depreciative behavior or are incentive programs which seek to alleviate pressing depreciative behavior problems by a reward system the best solution in the short run? What, then, of the long term programs?

More research needs to be concentrated on depreciative behavior and its social aspects before it can be certain of the extent to which many of today's modern campers have really adjusted to changes in the camping scene. The picture is far from complete as little is really known about



depreciative behavior in nontransient undeveloped campgrounds.

A complete picture would also include the views of the wilderness camper on this topic. It is already known that the purist wilderness user is very sensitive to the problems which human behavior cause, but what behavior actually takes place and how aware are the majority of wilderness users who are not purists of depreciative behavior? One other area of interest is the reactions and effectiveness of various measures which could be used to control the detrimental effects of depreciative behavior. Some excellent pioneer efforts have been made in the area of incentive programs for litter control, but other areas such as natural environment damage and other socially depreciative behavior are in need of further research, especially in areas where permanent supervision is not available. In essence there is much less known about the effects of depreciative behavior in national parks than would be necessary to aid in the setting up of capacity limits, but it is believed that research on this topic can do much to alter the imbalance of information available between the ecological limits and social limits of carrying capacity.



## BIBLIOGRAPHY





## SELECTED BIBLIOGRAPHY

- Ackerman, E. (1963) "Where is a Research Frontier?" Annals of the Association of American Geographers. (Vol. 53): 429-440.
- Allport, G. W. (1935) "Attitudes," in C. Murchison (edt.), A Handbook of Social Psychology. Worcester, Mass.: University Press.
- Appleyard, D. K; K. Lynch; and J. Myer (1964) The View from the Road. Cambridge, Mass.: The M.I.T. Press
- Barrows, Harlan H. (1923) "Geography as Human Ecology." Annals of the Association of American Geographers. (Vol. 13): 1-14.
- Beyers, B. (1970) "Recreation Research in the United States of America, in Western Geographical Series No. 3, (Resources, Recreation and Research). Vancouver, British Columbia: The University of British Columbia.
- Bridgeman, P. W. (1927) The Logic of Modern Physics. New York: Macmillan.
- Brookfield, H. C. (1969) "On the Environment as Perceived," in C. Board et al. (edts.), Progress in Geography Vol. 1. London: Edward Arnold Ltd.
- Bultena, G. L. and L. L. Klessig (1969) "Satisfaction in Camping: A conceptualization and guide to social research." Journal of Leisure Research. (Vol. 1, No. 4): 348-354.
- \_\_\_\_\_ and M. J. Taves (1961) "Changing Wilderness Images and Forestry Policy." Journal of Forestry (Vol.59):167-171.
- Burch, William R., Jr. (1964a) "Two Concepts for Guiding Recreation Management Decisions." Journal of Forestry. (Vol. 62): 707-712.
- \_\_\_\_\_ (1964b) "Observation as a Technique for Recreation Research." U.S.D.A. Forest Service Research Paper. Portland, Oregon: Pacific Northwest Forest and Range Experiment Station.
- \_\_\_\_\_ (1965) "The Play World of Camping: Research into the Social Meaning of Outdoor Recreation." The American Journal of Sociology. (Vol. 60): 604-612.
- \_\_\_\_\_ (1966) "Wilderness - The Life Cycle and Forest Recreational Choice." Journal of Forestry. (Vol. 64): 606-610.



- \_\_\_\_\_ (1970) "Recreation Preferences as Culturally Determined Phenomena," in B. L. Driver (edt.), Elements of Outdoor Recreation Planning. Univ. of Michigan: University Microfilms (Xerox Corp.).
- \_\_\_\_\_ and W.P. Wenger, Jr. (1967) "The Social Characteristics of Participants in Three Styles of Family Camping." U.S.D.A. Forest Service Research Paper PNW-48. Portland, Oregon: Pacific Northwest Forest and Range Experiment Station.
- Bureau of Outdoor Recreation (1967) Outdoor Recreation Trends. Washington D.C.: United States Government Printing Office.
- Burgess, Robert L.; R. N. Clark; and J. C. Hendee (1971) "An Experimental Analysis of Anti-Litter Procedures." Journal of Applied Behavior Analysis. (Vol. 4):71-75.
- Burton, Ian and R. W. Kates (1964) "The Floodplain and the Seashore." Geographical Review. (Vol. 54): 366-385.
- Campbell, Colin K. (1966) "An Approach to Recreational Geography," in Western Geographical Series No. 3, (Resources, Recreation, and Research). Vancouver, British Columbia: The University of British Columbia.
- Campbell, Fredrick L. (1970) "Participant Observation in Outdoor Recreation." Journal of Leisure Research. (Vol. 2): 226-236.
- \_\_\_\_\_; J. C. Hendee; and R. N. Clark, (1968) "Law and Order in Public Parks." Parks and Recreation. (Vol. 3):28-31, 51-55.
- Carr, Steven and Dale Schissler (1969) "The City as a Trip." Environment and Behavior. (Vol. 2):7-35.
- Catton, William R., Jr. (1969) "Motivations of Wilderness Users." Pulp and Paper Magazine of Canada. (December 19):121-126.
- Cieslinski, Thomas J. and J. A. Wagar (1970) "Predicting the Durability of Forest Recreation Sites in Northern Utah - Preliminary Results." U.S.D.A. Forest Service Research Note INT-117 Ogden, Utah: Intermountain Forest and Range Experiment Station.
- Clark, Roger N. (1970) "Recreation Research in Geography: A critical analysis," in Western Geographical Series No. 3, (Resources, Recreation, and Research). Vancouver, British Columbia The University of British Columbia.



- \_\_\_\_\_ (1971) "Undesirable Behavior in Forest Campgrounds," in Forest Recreation Symposium Proceedings. Upper Darby, Penn.: Northwestern Forest Experiment Station, U.S.D.A. Forest Service.
- \_\_\_\_\_ ; R. L. Burgess; and J. C. Hendee (1972) "The Development of Anti-Litter Behavior in a Forest Campground." Journal of Applied Behavior Analysis. (Vol. 5):1-5.
- \_\_\_\_\_ ; J. C. Hendee; and F. L. Campbell (1971a) "Values, Behavior, and Conflict in Modern Camping Culture." Journal of Leisure Research. (Vol. 3):143-159.
- \_\_\_\_\_ ; J. C. Hendee; and F. L. Campbell (1971b) "Depreciative Behavior in Forest Campgrounds: An Exploratory Study." U.S.D.A. Forest Service Research Note PNW-161. Portland, Oregon: Pacific Northwest Forest and Range Experiment Station.
- \_\_\_\_\_ ; J. C. Hendee; and R. F. Washburne (1972) "Litterbags: An Evaluation of Their Use." U.S.D.A. Forest Service Research Note PNW-184. Portland, Oregon: Pacific Northwest Forest and Range Experiment Station.
- Clawson, Marion (1968) "The Development of Recreation in the United States and Canada and its implications for the National Parks," in J. G. Nelson and R. C. Scace (eds.), Studies in Land Use History and Change in the National Parks No. 3, Vol. 1, (The Canadian National Parks: Today and Tomorrow). The University of Calgary, Alberta.
- Coleman, John R. (1967) "The Visitor Impact on the National Parks of Canada," in International Union for the Conservation of Nature Publication No. 7, Pt. 1, (Towards a New Relationship of Man and Nature in Temperate Lands). Morges, Switzerland.
- Collins, Barry E. (1970) Social Psychology. Menlo Park, Calif: Addison-Wesley Publishing Co.
- Cook, Stuart W. and C. Selltitz (1970) "A Multiple-Indicator Approach to Attitude Measurement," in G. Summers (edt.), Attitude Measurement. Chicago: Rand McNally and Co.
- Cordell, Harold K. and C. K. Sykes (1969) "User Preferences for Developed-Site Camping." U.S.D.A. Forest Service Research Note SE-122. Ashville, North Carolina: South-eastern Forest Experiment Station.
- Darling, F. Fraser and N. D. Eichhorn (1967) "The Ecological Implications of Tourism in National Parks," in International Union for the Conservation of Nature Publication No. 7, Pt.1, (Towards a New Relationship of Man and Nature in Temperate Lands). Morges, Switzerland.





- Dasman, Raymond F. (1968) "Recreation and the National Parks," in J. G. Nelson and R. C. Scace (eds.), Studies in Land Use History and Change in the National Parks No. 3, Vol. 1, (The Canadian National Parks: Today and Tomorrow). The University of Calgary, Alberta.
- Dooling, Peter John (1967) An Exploratory Study of Factors Affecting Outdoor Recreation Demand of the Adult Edmonton Population, Alberta, Canada. Unpublished M.A. Thesis: University of Alberta.
- Downs, Roger M. (1970) "Geographic Space Perception: Past Approaches and Future Prospects," in C. Board et.al.(eds.), Progress in Geography Vol. 2. London: Edward Arnold Ltd.
- Echelberger, Herbert E. (1971) "Vegetative Changes at Adirondack Campgrounds 1964 to 1969." U.S.D.A. Forest Service Research Note NE-142. Upper Darby, Penn.: Northeastern Forest Experimental Station.
- Eichhorn, Noel D. (1964) "Special Role of National Parks," in F.F. Darling and J.P. Milton (eds.), Future Environments of North America. Garden City, New York: Natural History Press.
- Etzkorn, K. Peter (1964) "Leisure and Camping: The Social Meaning of a Form of Public Recreation." Sociology and Social Research. (Vol. 49):76-89.
- Everhart, William C. (1972) The National Park Service. New York: Praeger Publishers.
- Febvre, Z. (1932) A Geographical Introduction to History, (English translation by Mountford, E.C. and J.H. Paxton). London: Kegan Paul, Trench, Turner.
- Feifel, Herman (1970) "Philosophy Reconsidered," in D. P. Schultz (edt.), The Science of Psychology: Critical Reflections. New York: Appleton-Century-Crofts.
- Feigal, Herbert (1970) "Philosophical Embarrassments of Psychology," in D.P. Schultz (edt.), The Science of Psychology: Critical Reflections. New York: Appleton-Century-Crofts.
- Fishbein, Martin (1967) "A Consideration of Beliefs, and their role in Attitude Measurement," in M. Fishbein (edt.), Readings in Attitude Theory and Measurement. New York: John Wiley and Sons, Inc.
- Frissell, Sidney S., Jr. and D.P. Duncan (1965) "Campsite Preference and Deterioration in -Superior Canoe Country." Journal of Forestry. (Vol. 63):256-260.





- Glacken, Clarence J. (1956) "Changing Ideas of the Habitable World," in W. L. Thomas Jr. (edt.), Man's Role in Changing the Face of the Earth. Chicago: Univ. of Chicago Press.
- Gould, P.R. (1966) "On Mental Maps," Michigan Inter-University Community of Mathematical Geographers Discussion Paper No. 9.
- Grazia, Sabastian de (1970) "Some Reflections on the History of Outdoor Recreation," in B.L. Driver (edt.), Elements of Outdoor Recreation Planning. Univ. of Michigan: University Microfilms (Xerox Corp.).
- Hadley, Lawrence C. (1971) "Perspectives on Law Enforcement in Recreation Areas," in Forest Recreation Symposium Proceedings. Upper Darby, Penn.: Northeastern Forest Experiment Station, U.S.D.A. Forest Service.
- Hartley, Eugene L. (1950) "The Social Psychology of Opinion Formation." Public Opinion Quarterly. (Vol. 14):668-674.
- Hendee, John C. (1967) Recreation Clientele - The Attributes of Recreationists Preferring Different Management Agencies, Car Campgrounds or Wilderness in the Pacific Northwest. Unpublished Ph.D. Dissertation: Univ. of Washington, Seattle.
- \_\_\_\_\_ and F. L. Campbell (1969) "Social Aspects of Outdoor Recreation in the Developed Campground." Parks and Recreation. (October):13-16.
- \_\_\_\_\_ ; W. R. Catton; L. D. Marlow; and F. C. Brockman (1968) "Wilderness Users in the Pacific Northwest - their characteristics, values, and management preferences." U.S.D.A. Forest Service Research Paper PNW-61. Portland, Oregon: Pacific Northwest Forest and Range Experiment Station.
- \_\_\_\_\_ ; R. P. Gale; and W. R. Catton, Jr. (1971) "A Typology of Recreation Activity Preferences." Journal of Environmental Education. (Vol. 3):28-34.
- \_\_\_\_\_ and R. W. Harris (1970) "Foresters' Perception of Wilderness User Attitudes and Preferences." Journal of Forestry. (Vol. 68):759-762.
- \_\_\_\_\_ and R. M. Pyle (1972) "Wilderness Users: A Problem of Perception." Naturalist. (Vol. 22):22-26.
- Henderson, Gavin (1968) "The Role of the Public in National Park Planning and Decision Making," in J. G. Nelson and R. C. Scace (edts.), Studies in Land Use History and Change in the National Parks No. 3, Vol. II, (The Canadian National Parks: Today and Tomorrow). The Univ. of Calgary, Alberta.



- Hildum, Donald C. and R. W. Brown (1956) "Verbal Reinforcement and Interviewer Bias." Journal of Abnormal and Social Psychology. (Vol. 53):108-111.
- Hope, Jack (1971) "Hassels in the Park." Natural History. (Vol. 80):20-23, 82-91.
- Jennison, George M. (1967) "Impacts of Recreation on the ecology of Temperate North American Forests," in International Union for the Conservation of Nature Publication No. 7, Pt. 1, (Towards a New Relationship of Man and Nature in Temperate Lands). Morges, Switzerland.
- Johnson, Warren A. (1967) "Over-use of the National Parks." National Parks Magazine. (Vol. 41):4-7.
- Kates, R. F. (1962) "Hazard and Choice Perception in Flood Plain Management." Univ. of Chicago Dept. of Geography Research Paper No. 78.
- King, David A. (1965) "Characteristics of Family Campers using the Huron-Manistee National Forests," U.S.D.A. Forest Service Research Paper LS-19. St. Paul, Minn.: Lake States Forest Experiment Station.
- \_\_\_\_\_, (1966) "Activity Patterns of Campers." U.S.D.A. Forest Service Research Note NC-18. St. Paul, Minn.: Lake States Forest Station.
- \_\_\_\_\_, (1968) "Socioeconomic Variables Related to Campsite Use." Forest Science. (Vol. 14):45-54.
- Kirk, William (1952) "Historical Geography and the Concept of the Behavioral Environment." Indian Geographical Journal, Silver Jubilee Edition. Indian Geographical Society.
- \_\_\_\_\_, (1963) "Problems in Geography." Geography. (Vol. 47):357-371).
- Knetsch, Jack L. (1968) "Providing for National Park Values and Related Values," in J. G. Nelson and R. C. Scace (eds.). Studies in Land Use History and Change in the National Parks No. 3, Vol. 1, (The Canadian National Parks: Today and Tomorrow). Univ. of Calgary, Alberta.
- Knopp, Timothy (1972) "Environmental Determinants of Recreational Behavior." Journal of Leisure Research. (Vol. 4):129-138.
- Kraus, Richard (1971) Recreation and Leisure in Modern Society. New York: Appleton-Century-Crofts.



Kretch; Crutchfield; and Ballachey (1962) Individual in Society. New York: McGraw-Hill.

LaPage, Wilbur (1967) "Some Observations on Campground Trampling and Ground Cover Response." U.S.D.A. Forest Service Research Paper NE-68. Upper Darby, Penn.: Northeastern Forest Experiment Station.

\_\_\_\_\_, (1969a) "The Family Camping Phenomenon - Motivation - Ways and Means - Accommodations," from Proceedings of the Southeastern Park and Recreation Training Institute for Planning Maintenance and Operation. Raleigh, North Carolina: North Carolina State University.

\_\_\_\_\_, (1969b) "The Camper Views the Interview." Journal of Leisure Research. (Vol. 1):181-186.

\_\_\_\_\_ and D. R. Ragain (1971a) "Trends in Camping Participation." U.S.D.A. Forest Service Research Paper NE-183. Upper Darby, Penn.: Northeast Forest Experiment Station.

\_\_\_\_\_ and D. R. Ragain (1971b) "A Second Look at the Heavy Half of the Camping Market," U.S.D.A. Forest Service Research Paper NE-196. Upper Darby, Penn.: Northeastern Forest Experiment Station.

Lime, David W. (1970) "Research for Determining Use Capacities of the Boundary Waters Canoe Area." Naturalist. (Vol. 21): 9-13.

\_\_\_\_\_ (1971) "Factors Influencing Use in Superior National Forest of Minnesota." U.S.D.A. Forest Service Research Paper NC-60. St. Paul, Minn.: North Central Forest Experiment Station.

\_\_\_\_\_ and George H. Stankey (1971a) "Carrying Capacity: Maintaining Outdoor Recreation Quality," in Forest Recreation Symposium Proceedings. Upper Darby, Penn.: Northeastern Forest Experiment Station, U.S.D.A. Forest Service.

\_\_\_\_\_ and George H. Stankey (1971b) "A Selected Bibliography of Literature Related to Recreational Carrying Capacity Decisionmaking." St. Paul, Minn.: North Central Forest Experiment Station, U.S.D.A. Forest Service.

Lowenthal, David (1961) "Geography, Experience, and Imagination: Towards a Geographic Epistemology." Annals of the Association of American Geographers. (Vol. 51):241-260.





- \_\_\_\_ (edt.) (1967) "Environmental Perception and Behavior." Univ. of Chicago Dept. of Geog. Research Paper No. 109.
- \_\_\_\_ (edt.) (1972a) Environment and Behavior. (Vol. 4, No. 3)
- \_\_\_\_ (1972b) "Research in Environmental Perception and Behavior." Environment and Behavior. (Vol.4):333-342.
- \_\_\_\_ and H. Prince (1964) "The English Landscape." Geographical Review. (Vol. 54):309-346.
- \_\_\_\_ and H. Prince (1965) "English Landscape Tastes." Geographical Review. (Vol. 55):186-222.
- Lucas, Robert C. (1964) "Wilderness Perception and Use: The Example of the Boundary Waters Canoe Area." Natural Resources Journal. (Vol. 3):394-411,
- Lucas, Robert C. (1968) "Research Needs for National Parks," in J. G. Nelson and R. C. Scace (eds.), Studies of Land Use History and Change in the National Parks No. 3, Vol. II, (The Canadian National Parks: Today and Tomorrow). University of Calgary, Alberta.
- \_\_\_\_ (1970) "User Evaluation of Campgrounds on Two Michigan National Forests." U.S.D.A. Forest Service Research Paper NC-44. St. Paul, Minn.: North Central Forest Experiment Station.
- Lynch, Kevin (1960) The Image of the City. Cambridge, Mass.: The M.I.T. Press and Harvard Univ. Press.
- McCall, George J. and J. L. Simmons (1969) Issues in Participant Observation: A Text and Reader. Reading, Mass.: Addison-Wesley Publishing Co.
- McCool, Stephen F. and L. C. Merriam (1970). "Factors Associated with Littering Behavior in the Boundary Waters Canoe Area." Minnesota Forestry Research Note No. 218. St. Paul, Minn.: Univ. of Minnesota.
- McCool, Stephen F.; L. C. Merriam; and C. T. Cushwa (1969) "The Condition of Wilderness Campsites in the Boundary Waters Canoe Area." Minnesota Forestry Research Note No. 202. St. Paul Minn.: Univ. of Minnesota.
- McMurry, K. C. (1954) "Recreational Geography," in James and Jones (eds.), American Geography: Inventory and Prospect.





- Magill, Arthur W. (1970) "Five California Campgrounds . . . conditions improve after five years recreational use." U.S.D.A. Forest Service Research Paper PSW-62. Berkeley, Calif.: Pacific Southwest Forest and Range Experiment Station.
- Marler, Lela (1971) "A Study of Anti-Litter Messages." Journal of Environmental Education. (Vol. 3):52-53.
- Marsh, George Perkins (1864) Man and Nature, or Physical Geography as Modified by Human Action. New York: Scribner, Armstrong and Co.
- Mead, Margret (1962) "Outdoor Recreation in the Context of Emerging American Cultural Values: Background Considerations," in Outdoor Recreation Resources Review Commission Study Report No. 22 (Trends in American Living in Outdoor Recreation). Washington, D.C.: Government Printing Office.
- Mercer, David (1971) "The role of Perception in the Recreation Experience: A Review and Discussion." Journal of Leisure Research. (Vol. 3):261-276.
- Merriam, L. C. (1963) "A Land Use Study of the Bob Marshall Wilderness Area of Montana." Forest and Conservation Experiment Station Bulletin No. 26. Montana State Univ., School of Forestry.
- Michaud, Howard H. (1967) "Ecological Impact and Patterns of Use of American Forest Recreation Areas," in International Union for the Conservation of Nature Publication No. 7, Pt. 1, (Towards a New Relationship of Man and Nature in the Temperate Lands). Morges, Switzerland.
- Nash, Roderick (1968) "Wilderness and Man in North America," in J. G. Nelson and R. C. Scace (eds.), Studies of Land Use History and Change in the National Parks No. 3, Vol. 1, (The Canadian National Parks: Today and Tomorrow). Univ. of Calgary, Alberta.
- National and Historic Parks Branch (1969) National Parks Policy. Dept. of Indian Affairs and Northern Development. Ottawa: Queen's Printer for Canada.
- National and Historic Parks Branch (1970a) Jasper National Park Provisional Master Plan. Dept. of Indian Affairs and Northern Development. Ottawa: Queen's Printer for Canada.
- National and Historic Parks Branch (1970b) National Park Campgrounds 1970: A Statistical Reference on Use. Planning Division, Dept. of Indian Affairs and Northern Development. Ottawa: Queen's Printer for Canada.



National Parks Act (1930) Chapter 33, 20-21, George V.

Nicol, Jon I. (1968) "The National Parks Movement in Canada," in J. G. Nelson and R. C. Scace (edts.), Studies of Land Use History and Change in the National Parks No. 3, (The Canadian National Parks: Today and Tomorrow). Univ. of Calgary, Alberta.

Nixon, H. N. (1967a) "Jasper National Park: Visitor Use Survey." Recreation Research Report No. 31. National and Historic Parks Branch, Dept. of Indian Affairs and Northern Development. Ottawa: Queen's Printer for Canada.

\_\_\_\_ (1967b) "Banff National Park: Aspects of Visitor Use." Recreation Research Report No. 26. National and Historic Parks Branch, Dept. of Indian Affairs and Northern Development. Ottawa: Queen's Printer for Canada.

Noake, Colonel D. W. (1967) "Camping as a Factor in the Ecological Impact of Tourism and Recreation," in International Union for the Conservation of Nature Publication No. 7, Pt. 1, (Towards a New Relationship of Man and Nature in Temperate Lands). Morges, Switzerland.

O'Riordan, Timothy (1970) "Outdoor Recreation Research," in Western Geographical Series No. 3, (Resources, Recreation and Research). Vancouver, British Columbia: Univ. of British Columbia.

Osgood, Charles E.; G. J. Suci; and P. H. Tannenbaum (1970) "Attitude Measurement," in G. Summers (edt.), Attitude Measurement. Chicago: Rand McNally and Co.

Outdoor Recreation Resources Review Commission (1962a) "National Recreation Survey." O.R.R.R.C. Study Report No. 19. Washington, D.C.: Government Printing Office.

\_\_\_\_ (1962b) "Participation in Outdoor Recreation: Factors Affecting Demand Among American Adults." O.R.R.R.C. Study Report No. 20. Washington, D.C.: Government Printing Office.

\_\_\_\_ (1962c) "Wilderness and Recreation - a Report on Resources, Values, and Problems." O.R.R.R.C. Study Report No. 3. Washington, D.C.: Government Printing Office.

Ripley, Thomas H. (1962) "Recreation Impact on Southern Appalachian Campgrounds and Picnic Sites." U.S.D.A. Forest Service Research Note SE-153. Asheville, North Carolina: Southeastern Forest Experiment Station.

Rogers, Carl R. (1970) "Some Thoughts Regarding the Current Philosophy of the Behavioral Sciences," in D. P. Schultz (edt.), The Science of Psychology: Critical Reflections. New York: Appleton-Century-Crofts.



- Rosenau, James N. (1964) "Meticulousness as a Factor in the Response to Mail Questionnaires." Public Opinion Quarterly. (Vol. 28):313-314.
- Rosenthal, Robert (1963) "On the Social Psychology of the Psychological Experiment: The Experimenter's Hypothesis as unintended Determinant of Experimental Results." American Scientist. (Vol. 51):268-283.
- Saarinen, Thomas F. (1966) "Perception of the Drought Hazard on the Great Plains." Univ. of Chicago, Dept. of Geog., Research Paper No. 106.
- \_\_\_\_\_. (1969) "Perception and Environment." Commission on College Geography Resource Paper No. 5. Washington, D.C.:
- Sadler, Barry (1970) Conflicts of Perception and Use in Banff National Park. Unpublished M.A. Thesis, Univ. of Alberta, Edmonton.
- \_\_\_\_\_. (1971) "Perception of Environment: Some Theoretical Aspects." The Albertan Geographer. (1971):52-57.
- Sauer, Carl O. (1941) "Foreward to Historical Geography." Annals of the Association of American Geographers. (Vol. 31):1-24.
- Sawyer, R. N. and T. E. Harbaugh (1970) "A Methodology for the Construction of Attitude Measuring Instruments." Water Resources Bulletin. (Vol. 6):401-407.
- Schiff, Myra (1971) "The Definition of perceptions and attitudes," in Sewell, W.R.D. and I. Burton (eds.), Policy Research and Coordination Branch, Dept. of Energy, Mines and Resources Resource Paper No. 2. Ottawa: Information Canada.
- Schlatter, John (1972) "Great Smokies Trails: the backpacking permit system." The National Parks and Environment Journal. (Vol. 46):13-17.
- Scott-Williams, Bettie W. (1967) "Effects of Visitor Use on the Ecosystems of Rocky Mountain National Park, Colorado, U.S.A.," in International Union for the Conservation of Nature Publication No. 7, Pt. 1, (Towards a New Relationship of Man and Nature in Temperate Lands). Morges Switzerland.
- Sewell, W.R.D. and I. Burton (eds.) (1971) "Perceptions and Attitudes in Resources Management." Policy Research and Coordination Branch, Dept. of Energy, Mines and Resources Resource Paper No. 2. Ottawa: Information Canada.
- Shafer, Elwood L. Jr. (1965) "Socioeconomic Characteristics of Adirondack Campers." Journal of Forestry. (Vol.63):600-694.





- \_\_\_\_\_. (1969) "The Average Camper Who Doesn't Exist." U.S.D.A. Forest Service Research Paper NE-142. Upper Darby, Penn.: Northeast Forest Experiment Station.
- \_\_\_\_\_. and J. Meitz (1967) "Aesthetic and Emotional Experiences Rate High with Northeast Wilderness Hikers." Environment and Behavior. (Vol. 1):187-197.
- Sherif, Muzar and Carolyn W. Sherif (1970) "Attitude as the Individual's Own Categories: The Social Judgment-Involvement Approach to Attitude Change," in G. Summers (edt.), Attitude Measurement. Chicago: Rand McNally and Co.
- Sonnenfeld, J. (1965) "Environmental Perception and Adaption Level in the Arctic." Paper presented at the 61st Annual Meeting of the Association of American Geographers, at Columbus, Ohio, April 20, 1965.
- Stankey, George (1971) "Wilderness: Carrying Capacity and Quality." Naturalist. (Vol. 22):7-13.
- Stenton, Jean E. (1969) "A Critical Look at Canada's National Parks." Canadian Geographic Journal. (Vol. 79):180-191.
- Stone, Gregory P. and M. T. Taves (1958) "Camping in the Wilderness," in E. Larrabee and R. Meyersohn (eds.), Mass Leisure. Glencoe, Ill.: The Free Press.
- Suchman, Edward A. and B. McCandless (1940) "Who Answers Questionnaires?" Journal of Applied Psychology. (Vol. 24):758-769.
- Taylor, Gordon D. (1965) "An Appraisal of Public Reaction to Campground Facilities and Standards Two Jack Lake Campground - Banff National Park." Recreation Research Report No. 20. National and Historic Parks Branch, Dept. of Indian Affairs and Northern Development. Ottawa: Queen's Printer for Canada.
- Thomas, William L., Jr. (edt.) (1956) Man's Role in Changing the Face of the Earth. Chicago: University of Chicago Press.
- Tuan, Yi-Fu (1971a) "Geography, Phenomenology, and the Study of Human Nature." Canadian Geographer. (Vol. 15):181-192.
- \_\_\_\_\_. (1971b) "Man and Nature." Commission on College Geography Resource Paper No. 10. Association of American Geographers.





- Thorsell, James W. (1968) "Trail Use Survey - Banff and Yoho National Parks." Recreation Research Report No. 33. National and Historic Parks Branch, Dept. of Indian Affairs and Northern Development. Ottawa: Queen's Printer for Canada.
- Wagar, J. Alan (1963) "Relationships Between Visitor Characteristics and Recreation Activities on two National Forest Areas." U.S.D.A. Forest Service Research Paper NE-7. Upper Darby, Penn.: Northeast Forest Experiment Station.
- \_\_\_\_\_ (1964) "The Carrying Capacity of Wildlands for Recreation." Forest Science Monograph No. 7.
- \_\_\_\_\_ (1971) "Communicating with Recreationists," in Forest Recreation Symposium Proceedings. Upper Darby, Penn." Northeast Forest Experiment Station, U.S.D.A. Forest Service.
- Webb, W. P. (1931) The Great Plains. Boston and New York: Ginn and Co.
- White, Gilbert F. (1961) "Papers on Flood Problems." Univ. of Chicago, Dept. of Geography, Research Paper No. 70.
- \_\_\_\_\_ (1966) "Formation and Role of Public Attitudes," in H. Jarrett (edt.), Environmental Quality in a Growing Economy. Baltimore, Maryland: Johns Hopkins.
- Wolfe, R. I. (1964) "Perspective on Outdoor Recreation: A Bibliographical Survey." Geographical Review. (Vol. 54): 203-238.
- \_\_\_\_\_ (1967) "The Geography of Outdoor Recreation: A Dynamic Approach." Univ. of British Columbia Geographical Series No. 8. Vancouver, British Columbia.
- Wolpert, J. (1964) "The Decision Process in Spatial Context." Annals of the Association of American Geographers. (Vol. 54): 537-558.
- Wood, L. J. (1970) "Perception Studies in Geography." Institute of British Geographers Transactions, No. 50. pp. 129-142.
- Wright, John K. (1947) "Terrae Incognitae." Annals of the Association of American Geographers. (Vol. 37): 1-15.



APPENDIX I  
TYPES OF ACTS CONSTITUTING DEPRECIATIVE BEHAVIOR



## Types of Depreciative Acts under Observation

### Legalistic

Acts which break any rules, regulations, or laws that were applicable in Canadian National Park campgrounds as well as a few other acts were observed. An act can be both legalistic, and vandalistic, or legalistic and a nuisance act or all three. However, the act was located under the heading which it best fitted regardless of the legality of the act.

#### Laws

##### Criminal Code

All major crimes

Theft - private (food, camping equipment or other personal belongings) public (signs, wood, handles)

Liquor Laws - are under the province of Alberta. A person can drink in his own residence which includes a campsite. Outside of that drinking elsewhere in the campground is an offence.

Traffic Regulations - these came from the National Parks Act and in a campground mainly involve fast driving.

#### Park Regulations

Bringing in an unsealed firearm - or using one in any way  
Concealing any flora or fauna of the park in a camping vehicle or shelter.

#### Campground rules

Keep vehicles on the roadways

Littering in a campsite, or any other area of the campground.

Trash should be deposited in cans or burned.

11:00 a.m. check out time

No picnicing in the campsites

More than one party to a site is not allowed

Camping off the designated site areas

Sleeping in a kitchen shelter

Erecting or affixing any tarpaulin, blanket, structure of wood, wood products, metal or other material to the walls or superstructure of any public building in the park was not allowed

A camper cannot use or utilize an area under permit to him or any public building, structure, or appurtenance to detriment or inconvenience of other persons.



A camper is not allowed to leave any food, equipment, or personal effects in a kitchen shelter or on a picnic table, outdoor stove or fireplace furnished by the park service for public use, except during such reasonable period as such facilities are required for the purposes of preparing and consuming a meal or for washing up operations.

### Nuisance Acts

#### Excessive Noise

- \*Creation of disturbances after 11:00 p.m.
- Loud radio or record playing
- Vehicle noise in excess of normal operation
- Loud parties or gatherings after 11:00 p.m.

#### Health Hazards

- \*Keeping food where it will attract bears - left on an open table, in tents, or on the ground. Especially hazardous if left out overnight
- \*Feeding or encouraging animals to approach too closely, especially larger animals such as bear
- \*Leaving garbage scraps piled around garbage cans or left unburned in a site
- Messy toilet conditions

#### Unesthetic

- \*Leave campsite dirty, untidy - boxes & garbage left, food left on table, picnic table moved away, general messy conditions
- Creation of untidy conditions elsewhere in the camp area - around or in toilets, beach or riverside area (breaking bottles, cups, paper products, etc.)

#### Violations of Privacy

- Unsupervised children running through peoples camps
- Campers wandering through peoples' sites.

#### Pets

- \*Intentional freeing of pets to roam the campground (Dogs on leash at all times)
- \*Bringing them into washrooms or kitchen shelters

\* an actual regulation, rule, or law





Vandalistic Acts

## Destruction of campground facilities

- \*Signs mutilated, torn down, or destroyed
- \*Picnic tables moved, damaged, or burned
- \*Fireplaces damaged or destroyed
- \*Tent pads           "               "
- \*Well pump damaged or mistreated
- \*Pit toilets damaged, knocked over, written on, or carved on
- \*Dumping trash cans or damaging them

## Destruction of campground's natural environment

- \*Mutilating trees, carving initials, chopping off branches, hammering nails or other objects into them
- \*Cutting down trees-used for poles or firewood
- \*Driving cars off designated areas onto vegetation
- \*Fires built outside designated pits
- \*Picking of flowers, leaves or rocks and removing them from the area
- (Throwing dishwater into the shrubs or vegetated areas
- (Clearing of natural material in campsite area
- (Ground disturbances by pets (holes, scratching on trees)
- (Digging trenches around tents or from trailers
- (Moving picnic tables around the site
- \*Molesting wild animals
- Draining off waste water from trailers or mobile units directly onto the ground in the campsite
- \*Clearing of vegetation or cutting of it anywhere in the campground

## Destruction of private property

- \* an actual rule, regulation, or law



APPENDIX II  
INFORMATION AND RULES POSTED IN SECOND  
VISIT TO EACH CAMPGROUND



CAMPGROUND INFORMATION AND CAMPING RULES

It is necessary to have strict rules to operate and maintain a pleasant campground. Please assist us by abiding by the following rules.

Keep vehicles on roadways to avoid damage to the fragile natural ground cover. Cars MUST be parked on the areas provided for that purpose. Remember, your car tires may destroy in a few minutes what took years to grow.

Pets in National Parks must be kept on a leash at all times. They are NOT allowed in kitchen shelters and wash-rooms.

NO OPEN FIRES are permitted on the ground.

Dispose trash in the cans provided at each kitchen shelter and service centre.

Refrain from creating disturbances after 11:00 p.m.

Refrain from moving tables from buildings. Persons willfully damaging Government property are subject to severe penalties.

Keep your food where it will not attract bears. The safest place is in the trunk of your car - NEVER your tent.

Whether you are checking out or re-registering, please do so by 11:00 a.m.

We regret that it is not possible to grant refunds for camping permits.

Please leave your campsite CLEAN and TIDY.

D R I V E   C A R E F U L L Y   —   E N J O Y   Y O U R  
H O L I D A Y !



APPENDIX III

OBSERVATION REPORT FORMS





Depreciative Behavior Report Form

Campground \_\_\_\_\_ Time \_\_\_\_\_

Date \_\_\_\_\_ Ages(s) &amp; Sex(es) of Offenders \_\_\_\_\_

Campground Location \_\_\_\_\_  
\_\_\_\_\_

Associated Activity:

Type of Act \_\_\_\_\_

Description of depreciative behavior:

Reaction of Witness(es):

Interview \_\_\_\_\_ Yes \_\_\_\_\_ No

Apparent Motivation of Offender(s):

Any Official Action?







Daily Census of Campground Occupancy

Campground \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

| Site # | Party Size | Equipment Used | Type of Group |
|--------|------------|----------------|---------------|
| 1      |            |                |               |
| 2      |            |                |               |
| 3      |            |                |               |
| 4      |            |                |               |
| 5      |            |                |               |
| 6      |            |                |               |
| 7      |            |                |               |
| 8      |            |                |               |
| 9      |            |                |               |
| 10     |            |                |               |
| 11     |            |                |               |
| 12     |            |                |               |
| 13     |            |                |               |
| 14     |            |                |               |
| 15     |            |                |               |
| 16     |            |                |               |
| 17     |            |                |               |
| 18     |            |                |               |
| 19     |            |                |               |
| 20     |            |                |               |
| 21     |            |                |               |



APPENDIX IV

CAMPER INTERVIEW FORM





## University of Alberta

## Jasper National Park Camper Interview

Site number \_\_\_\_\_

- 1) About how many years have you gone camping for recreational enjoyment? \_\_\_\_\_
- 2) About how many days a year do you camp \_\_\_\_\_?
- 3) Why do you like to go camping \_\_\_\_\_
- 
- 4) Have you camped in a Canadian National Park before  
       Yes                      No  
 If yes have you camped in this campground before  
       Yes                      No
- 5) When camping which of these types of campgrounds do you usually select: (hand card) \_\_\_\_\_ remote  
       \_\_\_\_\_ undeveloped auto \_\_\_\_\_ developed auto  
       \_\_\_\_\_ other (                      )  
 Is this the type of campground you prefer to camp in  
       \_\_\_\_\_ yes                      No?  
 If no, what type \_\_\_\_\_.
- 6) What do you think are two or three of the most important rules that a camper should follow when camping in any campground?  
 a) \_\_\_\_\_  
 b) \_\_\_\_\_  
 c) \_\_\_\_\_
- 7) I am going to read you a short list of items and I would like you to tell me if any of the following would bother you in a campground in which you were camping:  
 (Please answer either yes or no)
- |                                                                                    | Yes   | No    |
|------------------------------------------------------------------------------------|-------|-------|
| a) unburned litter in the fire place of your newly selected campsite<br>_____      | _____ | _____ |
| b) children catching small squirrels to take home<br>_____                         | _____ | _____ |
| c) a person listening to a moderately loud radio in his campsite near you<br>_____ | _____ | _____ |



d) a vehicle parked off designated areas due to crowding

e) a group of children running through your campsite

f) a man taking chopped firewood from other people's sites while they are away

g) a loud gathering at a campsite near you going until 1:00 a.m. in the morning

h) a group of children playing ball in an empty site

- 8) Now I'm going to show you some illustrations which I would like you to look at and then tell me if any of the activities in these pictures indicate that any of the laws, regulations, or rules governing behavior in a Canadian National Park campground are being broken. These are not trick pictures, as there is only one activity in each picture. Please answer either yes or no, or you may answer don't know if you aren't sure.

|           | Yes   | No    | Don't Know | Comments |
|-----------|-------|-------|------------|----------|
| Picture 1 | _____ | _____ | _____      | _____    |
| Picture 2 | _____ | _____ | _____      | _____    |
| Picture 3 | _____ | _____ | _____      | _____    |
| Picture 4 | _____ | _____ | _____      | _____    |
| Picture 5 | _____ | _____ | _____      | _____    |
| Picture 6 | _____ | _____ | _____      | _____    |



- 9) This next set of items is very similar to the last, however, here I would like you to tell me the number above the category you select (hand the card). This allows you to evaluate how suitable you think the following actions are in a Canadian National Park campground such as this one:

a) throwing used dishwater into nearby shrubs

1    2    3    4    5    \_\_\_\_\_

b) picking a few leaves and flowers to take home

1    2    3    4    5    \_\_\_\_\_

c) teaching children to stay away from wild animals and only to watch them

1    2    3    4    5    \_\_\_\_\_

d) taking chopped firewood from an empty site

1    2    3    4    5    \_\_\_\_\_

e) becoming intoxicated and wandering around the campground

1    2    3    4    5    \_\_\_\_\_

f) vacating a campsite in the late afternoon--around 3:30 p.m.

1    2    3    4    5    \_\_\_\_\_

g) putting out a fire that another camper has left burning in his site after he has left the campground

1    2    3    4    5    \_\_\_\_\_

h) leaving food supplies on the picnic table overnight

1    2    3    4    5    \_\_\_\_\_

i) letting a dog roam through the campground by himself

1    2    3    4    5    \_\_\_\_\_

j) firing a gun at a bear which is scavaging in the campground

1    2    3    4    5    \_\_\_\_\_



- k) teaching children how to dig a firepit and how to light a fire in it

1    2    3    4    5    \_\_\_\_\_

- l) sleeping in a kitchen shelter overnight

1    2    3    4    5    \_\_\_\_\_

- m) digging a trench around a tent site to drain off water

1    2    3    4    5    \_\_\_\_\_

- n) draining waste from a trailer directly onto the ground nearby

1    2    3    4    5    \_\_\_\_\_

- 10) If you were to see any of the following activities in this campground tell me which of these actions printed on this card that you would take? (please give me the number printed above the appropriate action you would choose)

- a) an adult camper verbally threatening another camper \_\_\_\_\_

- b) a child or group of children damaging a park facility \_\_\_\_\_

- c) an adult camper littering in the campground \_\_\_\_\_

- d) a teenage camper carving his initials in a tree or in some way damaging the tree \_\_\_\_\_

- e) someone obviously stealing another camper's equipment \_\_\_\_\_

- f) a group of older youths making excessive noise and drinking after 11:00 p.m. \_\_\_\_\_

- 11) Do you feel that campgrounds such as this one have problems with camper behavior \_\_\_\_\_ yes \_\_\_\_\_ no?  
If "yes" what types of problems? \_\_\_\_\_





- 12) Do you feel that there are any other camper activities that haven't been mentioned here that would or do bother you in a National Park campground?  
 \_\_\_\_\_ No \_\_\_\_\_ Yes (Specify: \_\_\_\_\_)  
 \_\_\_\_\_ )
- 13) Do you feel "safe" while camping in the Canadian National Parks? \_\_\_\_\_ Yes \_\_\_\_\_ No. If "no" what are a couple of the things which make you feel "unsafe" while camping?  
 a) \_\_\_\_\_  
 b) \_\_\_\_\_
- 14) Do you prefer a mobile campground attendant \_\_\_\_\_, a permanent attendant \_\_\_\_\_, or no attendant \_\_\_\_\_ while you are camping? \_\_\_\_\_
- 15) Do you feel that a camper's behavior should be different in a National Park campground from that in campgrounds outside the National Parks? \_\_\_\_\_ Yes \_\_\_\_\_ No. If "yes" in what way should a camper's behavior be different while he is in a National Park? \_\_\_\_\_  
 \_\_\_\_\_
- 16) Do you feel that it is your responsibility to help control the behavior of other campers \_\_\_\_\_ never, \_\_\_\_\_ only in severe circumstances, or \_\_\_\_\_ at all times?
- 17) Could you suggest any management changes that would affect tother camper's behavior that you would like to see in this campground? \_\_\_\_\_ No \_\_\_\_\_ Yes (Specify: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- 18) Why did you select this campground to stay at?  
 \_\_\_\_\_  
 \_\_\_\_\_
- 19) How many members are there in your party?  
 \_\_\_\_\_ Adults (20 and over) \_\_\_\_\_ Teens (13-19 years)  
 \_\_\_\_\_ Children (1-12 years)
- 20) What is your expected length of stay in this campground (number of nights) \_\_\_\_\_.
- 21) Which province or state do you live in \_\_\_\_\_



After Interview:

Approximate Age \_\_\_\_\_ Sex \_\_\_\_\_ Type of camping  
equipment: \_\_\_\_\_ car \_\_\_\_\_ tent \_\_\_\_\_ tent-trailer  
\_\_\_\_\_ trailer \_\_\_\_\_ camper \_\_\_\_\_ mobile unit  
\_\_\_\_\_ other (specify \_\_\_\_\_)

Date and time of interview:



## RESPONSE CARD FOR QUESTION #5

- \_\_\_\_\_ remote campground (can only be reached on foot or horse)
- \_\_\_\_\_ undeveloped automobile campground (pit toilets, no power hookups, centrally located water faucets)
- \_\_\_\_\_ developed and serviced auto campground
- \_\_\_\_\_ other

## RESPONSE CARD FOR QUESTION #9

| 1               | 2                         | 3       | 4                         | 5               |
|-----------------|---------------------------|---------|---------------------------|-----------------|
| Always<br>wrong | Wrong<br>in some<br>cases | Neutral | Right<br>in some<br>cases | Always<br>Right |

## RESPONSE CARD FOR QUESTION #10

| 1             | 2                                           | 3                                                 | 4                                                    | 5                                   |
|---------------|---------------------------------------------|---------------------------------------------------|------------------------------------------------------|-------------------------------------|
| Do<br>Nothing | Report when<br>Attendant<br>comes<br>around | Travel to<br>nearest<br>Park<br>Warden<br>Station | Speak to<br>the<br>person<br>or<br>group<br>involved | Directly<br>stop<br>the<br>activity |



APPENDIX V

MANAGEMENT QUESTIONNAIRE







August 1, 1972

Dear Sir;

Hello, I am Mrs. Lorna Stickel from the University of Alberta. I have been conducting research in three of the campgrounds in Jasper National Park since May of this year. Some of you may be familiar with my work, while others may not. I have been interviewing campers and observing their behavior throughout various weeks this summer. The focus of this research is on the way campers behave in campgrounds and how they feel about both their own behavior and the way other campers behave. The type of behavior I have been mainly looking at is "depreciative behavior," which is depreciative in the sense that it affects the quality of both the camper's recreational experience and the natural environment. As part of my research project I would like to obtain the viewpoints of those responsible for Jasper Park's administration. This questionnaire form which you will find attached to this letter is how I hope to obtain your viewpoint. It is long, but I think you'll find it interesting. Your answers will remain confidential and anonymous and for use only by myself. The stamped envelope for its return has only my address on it and you do not have to attach your name or address anywhere on the form. I do hope that you will take time to answer each question on this interview form, as it will not only help me, but also help the Park Service by adding an increasing body of knowledge surrounding the visitor and his behavior while visiting the Canadian National Parks.

A couple of things should be mentioned which might help you to answer the enclosed form.

- 1) If the space provided by the question does not leave enough room for your comments, please use the back side of the page and precede your comments by the appropriate question number.
- 2) Take your time with each question. If it is not understood, please state so and go on to the next question.
- 3) There is no time deadline for the return of these forms, but it would be appreciated if they were returned within six weeks.
- 4) When returning the completed form please remove this letter and pages a-h and dispose of/or keep them for your own use.

. . . con't.)



. . . 2

Anyone interested in the outcome of this research may find a copy of the finished report at the National Park Service's Regional Office in Calgary. Any further questions or comments concerning this form should be sent to me at the Geography Dept., Univ. of Alberta, Edmonton.

Sincerely yours,

Lorna Stickel  
Graduate Studies, and

Dr. Ian MacIver  
Graduate Advisor

Addition: One thing which I forgot to mention in the introductory letter is that most of the following questions deal with the "average undeveloped automobile campground camper." This means that I would like you to consider the average camper who goes to such campgrounds as: Fiddle River, Rocky River, Snaring River, Mt. Kerkeslin, Honeymoon Lake, Jonas Creek, Columbia Icefields, and Wilcox Creek (pit toilets, centrally located water, mobile campground attendant, etc). I do not want you to consider campers who consistently camp in the larger developed and serviced campgrounds such as Whistler's and Wapiti. Thank You.



## University of Alberta

Jasper National Park Management Questionnaire  
--for Stickel Thesis

- 1) What is your management position in Jasper National Park?  
\_\_\_\_\_. In general,  
what does your job entail and what land area of the Park  
do your responsibilities cover? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 2) Are you part time \_\_\_\_\_ or full time (year round) \_\_\_\_\_?  
If part time, what other occupations do you have outside  
the one reported above \_\_\_\_\_
- 3) How many years have you worked in Jasper National Park  
\_\_\_\_\_? How many years have you worked for the Canadian  
National Park Service \_\_\_\_\_?
- 4) What is the main purpose of the Canadian National Parks?

What are your personal views on the purpose of the Canadian National Parks?

- 5) About how many years do you believe the average undeveloped auto campground camper has camped \_\_\_\_\_? About how many days a year does the average camper camp \_\_\_\_\_?
- 6) Why do you think most campers who select undeveloped automobile campgrounds like to go camping \_\_\_\_\_  
\_\_\_\_\_
- 7) What do you think are two or three of the most important rules that a camper should follow when camping in any campground?  
a) \_\_\_\_\_  
b) \_\_\_\_\_  
c) \_\_\_\_\_



What do you think the camper would mention as being two or three of the most important rules that a camper should follow when camping?

- a) \_\_\_\_\_  
 b) \_\_\_\_\_  
 c) \_\_\_\_\_

- 8) The following are a short list of items and I would like you to appropriately mark whether or not any of these would bother you in a campground in which you were camping. For your own response please use column "a."

|                                                                                 | <u>"a"</u> |       | <u>"b"</u> |       |
|---------------------------------------------------------------------------------|------------|-------|------------|-------|
|                                                                                 | Yes        | No    | Yes        | No    |
| a) unburned litter in the fireplace of your newly selected campsite             | _____      | _____ | _____      | _____ |
| b) children catching small squirrels to take home                               | _____      | _____ | _____      | _____ |
| c) a person listening to a moderately loud radio in his campsite near you       | _____      | _____ | _____      | _____ |
| d) a vehicle parked off designated area due to crowding                         | _____      | _____ | _____      | _____ |
| e) a group of children running through your campsite                            | _____      | _____ | _____      | _____ |
| f) a man taking chopped firewood from other people's sites while they are away  | _____      | _____ | _____      | _____ |
| g) a loud gathering at a campsite near you going until 1:00 a.m. in the morning | _____      | _____ | _____      | _____ |
| h) a group of children playing ball in an empty site                            | _____      | _____ | _____      | _____ |

How do you think the average undeveloped auto campground camper would respond to those same items? Please go through the list again and mark your response in column "b".





- 9) (a) On pages a-f (at the back of the form) you will find six illustrations. Please mark below whether or not the activities indicate that any of the laws, regulations or rules governing behavior in a Canadian National Park campground are being broken. These aren't trick pictures as there is only one activity in each picture.

|           | Yes   | No    | Don't Know | Comments |
|-----------|-------|-------|------------|----------|
| Picture 1 | _____ | _____ | _____      | _____    |
| Picture 2 | _____ | _____ | _____      | _____    |
| Picture 3 | _____ | _____ | _____      | _____    |
| Picture 4 | _____ | _____ | _____      | _____    |
| Picture 5 | _____ | _____ | _____      | _____    |
| Picture 6 | _____ | _____ | _____      | _____    |

- (b) With these same pictures indicate how you think the average camper would respond if he were asked the same question.

|           | Yes   | No    | Don't Know | Comments |
|-----------|-------|-------|------------|----------|
| Picture 1 | _____ | _____ | _____      | _____    |
| Picture 2 | _____ | _____ | _____      | _____    |
| Picture 3 | _____ | _____ | _____      | _____    |
| Picture 4 | _____ | _____ | _____      | _____    |
| Picture 5 | _____ | _____ | _____      | _____    |
| Picture 6 | _____ | _____ | _____      | _____    |

- 10) For this next set of items please turn to page h and look at Card #1. Here I would like you to tell me the number above the category you select. This allows you to evaluate how suitable you think the following actions are in an undeveloped auto campground in Jasper National Park. On the top set of numbers please circle the number you select and feel free to make any comments in the space provided. After you have gone through the numbers the first time, please go through them again and indicate how you think the average camper would respond to these same items. Add any comments you feel a camper might make.

- (a) throwing used dishwater into nearby shrubs

|   |   |   |   |   |       |
|---|---|---|---|---|-------|
| 1 | 2 | 3 | 4 | 5 | _____ |
| 1 | 2 | 3 | 4 | 5 | _____ |

- (b) picking a few leaves and flowers to take home

|   |   |   |   |   |       |
|---|---|---|---|---|-------|
| 1 | 2 | 3 | 4 | 5 | _____ |
| 1 | 2 | 3 | 4 | 5 | _____ |



- (c) teaching children to stay away from wild animals and only to watch them

1 2 3 4 5 \_\_\_\_\_

1 2 3 4 5 \_\_\_\_\_

- (d) taking chopped firewood from an empty site

1 2 3 4 5 \_\_\_\_\_

1 2 3 4 5 \_\_\_\_\_

- (e) becoming intoxicated and wandering around the campground

1 2 3 4 5 \_\_\_\_\_

1 2 3 4 5 \_\_\_\_\_

- (f) vacating a campsite in the late afternoon--around 3:30 p.m.

1 2 3 4 5 \_\_\_\_\_

1 2 3 4 5 \_\_\_\_\_

- (g) putting out a fire that another camper has left burning in his site after he has left the campground

1 2 3 4 5 \_\_\_\_\_

1 2 3 4 5 \_\_\_\_\_

- (h) leaving food supplies on the picnic table overnight

1 2 3 4 5 \_\_\_\_\_

1 2 3 4 5 \_\_\_\_\_

- (i) letting a dog roam through the campground by himself

1 2 3 4 5 \_\_\_\_\_

1 2 3 4 5 \_\_\_\_\_



- (j) firing a gun at a bear which is scavaging in the campground

1    2    3    4    5    \_\_\_\_\_

1    2    3    4    5    \_\_\_\_\_

- (k) teaching children how to dig a firepit and how to light a fire in it

1    2    3    4    5    \_\_\_\_\_

1    2    3    4    5    \_\_\_\_\_

- (l) sleeping in a kitchen shelter overnight

1    2    3    4    5    \_\_\_\_\_

1    2    3    4    5    \_\_\_\_\_

- (m) digging a trench around a tent site to drain off water

1    2    3    4    5    \_\_\_\_\_

1    2    3    4    5    \_\_\_\_\_

- (n) draining waste from a trailer directly onto the ground nearby

1    2    3    4    5    \_\_\_\_\_

1    2    3    4    5    \_\_\_\_\_

- 11) (a) For this last set of items, please turn to page h and look at Card #2. If you were a camper in a small undeveloped auto campground and were to see any of the following activities indicate which of the actions printed on card #2 that you think you would take. Feel free to make any comments.

a) an adult camper verbally threatening another camper \_\_\_\_\_ (number please)

b) a child or group of children damaging a park facility \_\_\_\_\_

c) an adult camper littering in the campground \_\_\_\_\_

d) a teenage camper carving his initials in a tree or in some way damaging the tree \_\_\_\_\_



- e) someone obviously stealing another camper's equipment \_\_\_\_\_
  - f) a group of older youths making excessive noise and drinking after 11:00 p.m. \_\_\_\_\_
- (b) With these same activities please indicate how you think the average camper in these campgrounds would respond. Make any comments a camper might make.
- a) an adult camper verbally threatening another camper \_\_\_\_\_
  - b) a child or group of children damaging a park facility \_\_\_\_\_
  - c) an adult camper littering in the campground \_\_\_\_\_
  - d) a teenage camper carving his initials in a tree or in some way damaging the tree \_\_\_\_\_
  - e) someone obviously stealing another camper's equipment \_\_\_\_\_
  - f) a group of older youths making excessive noise and drinking after 11:00 p.m. \_\_\_\_\_
- 12) (a) Do you feel that the undeveloped auto campgrounds such as those in Jasper have problems with camper behavior \_\_\_\_\_ No \_\_\_\_\_ Yes? If yes, what types of problems.
- (b) How do you think the average camper in these campgrounds would respond to this same question? Don't know what average camper would say \_\_\_\_\_. Yes there are problems \_\_\_\_\_. No there are no problems. If yes, what types of problems do you think the camper would mention?
- 13) (a) Are there any other camper activities that haven't been mentioned in this interview that would bother you in a National Park campground \_\_\_\_\_ No \_\_\_\_\_ Yes? If yes, please specify what these activities are . . .





- (b) How would the average camper respond to this same question \_\_\_\_\_ No \_\_\_\_\_ Yes? If you feel he would say yes, please specify which activities you feel he would mention.
- 14) (a) Do you feel safe while camping in Canadian National Parks \_\_\_\_\_ Yes \_\_\_\_\_ No? If no, what are a couple of the things which make you feel "unsafe" while camping?
- (b) If you asked this same question to the average camper how do you think he would respond? \_\_\_\_\_ Yes \_\_\_\_\_ No. What reasons might he mention if he said "no"?
- 15) (a) Do you prefer a mobil campground attendant \_\_\_\_\_, a permanent attendant \_\_\_\_\_, or no attendant \_\_\_\_\_ while you are camping? If none of these, does it depend on the campground size and type \_\_\_\_\_ or do you have no preference \_\_\_\_\_?
- (b) How would the average undeveloped auto campground camper respond to this same question? mobile attendant \_\_\_\_\_, permanent attendant \_\_\_\_\_, no attendant \_\_\_\_\_, depends on the campground type and size \_\_\_\_\_, or no preference \_\_\_\_\_.
- 16) (a) Do you feel that a camper's behavior should be different in a National Park campground from that in campgrounds outside the National Parks? \_\_\_\_\_ Yes \_\_\_\_\_ No. If "yes" in what way should a camper's behavior be different while he is in a National Park?
- (b) How would the average camper respond to this same question? \_\_\_\_\_ Yes \_\_\_\_\_ No. If "yes" in what way would the camper say his behavior should be different when in a National Park?



- 17) (a) When you are camping for recreational enjoyment do you feel that it is your responsibility to help control the behavior of other campers \_\_\_\_\_ never, \_\_\_\_\_ only in severe circumstances, \_\_\_\_\_ or at all times?
- (b) How do you think the average undeveloped automobile campground camper would respond if he were asked the same question? \_\_\_\_\_ never, \_\_\_\_\_ only in severe circumstances, or \_\_\_\_\_ at all times.
- 18) (a) Could you suggest any management changes that would affect campers' behavior that you would like to see in the smaller undeveloped auto campgrounds in Jasper \_\_\_\_\_ No \_\_\_\_\_ Yes? If "yes" please specify what these are . . .
- (b) Do you think the average camper in these campgrounds would suggest any management changes that he would like to see \_\_\_\_\_ No \_\_\_\_\_ Yes? If "yes" please specify what you think the average camper would suggest . . .
- 19) What do you think are some of the reasons why campers select the small undeveloped auto campgrounds?
- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_
- 20) Do you think that most campers who select this type of campground (small undeveloped auto campground) do so because they prefer them to other types of campgrounds (such as remote or developed and serviced campgrounds)?  
 \_\_\_\_\_ Yes \_\_\_\_\_ No.  
 Comments:
- 21) (a) From which park gate do you believe most Albertans enter Jasper National Park? \_\_\_\_\_.



- (b) Do you feel that Albertans favor any specific  
campgrounds or areas in Jasper \_\_\_\_\_ Yes  
\_\_\_\_\_ No? If "yes" which ones? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 22) Do you feel that the average undeveloped auto campground  
camper in Jasper National Park is familiar with the  
rules and regulations which govern behavior within the  
campgrounds? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know.  
If you said "no," what solution or solutions could you  
offer to help campers become more aware of the rules  
and regulations? Or is any solution necessary?
- 23) Do you believe that most of the campgrounds in Jasper  
National Park are overcrowded during most of the summer  
months? \_\_\_\_\_ Yes \_\_\_\_\_ No. If you said "yes" what  
solution(s) do you see to this problem?
- 24) That was the last question in the interview. I thank  
you very much for your time and effort. If you have  
any comments or feelings you would like to make about  
this interview please feel free to make them here or on  
the back of the page. I am especially interested to  
know if you had any problems with any of the questions.  
Again, thank you very much!

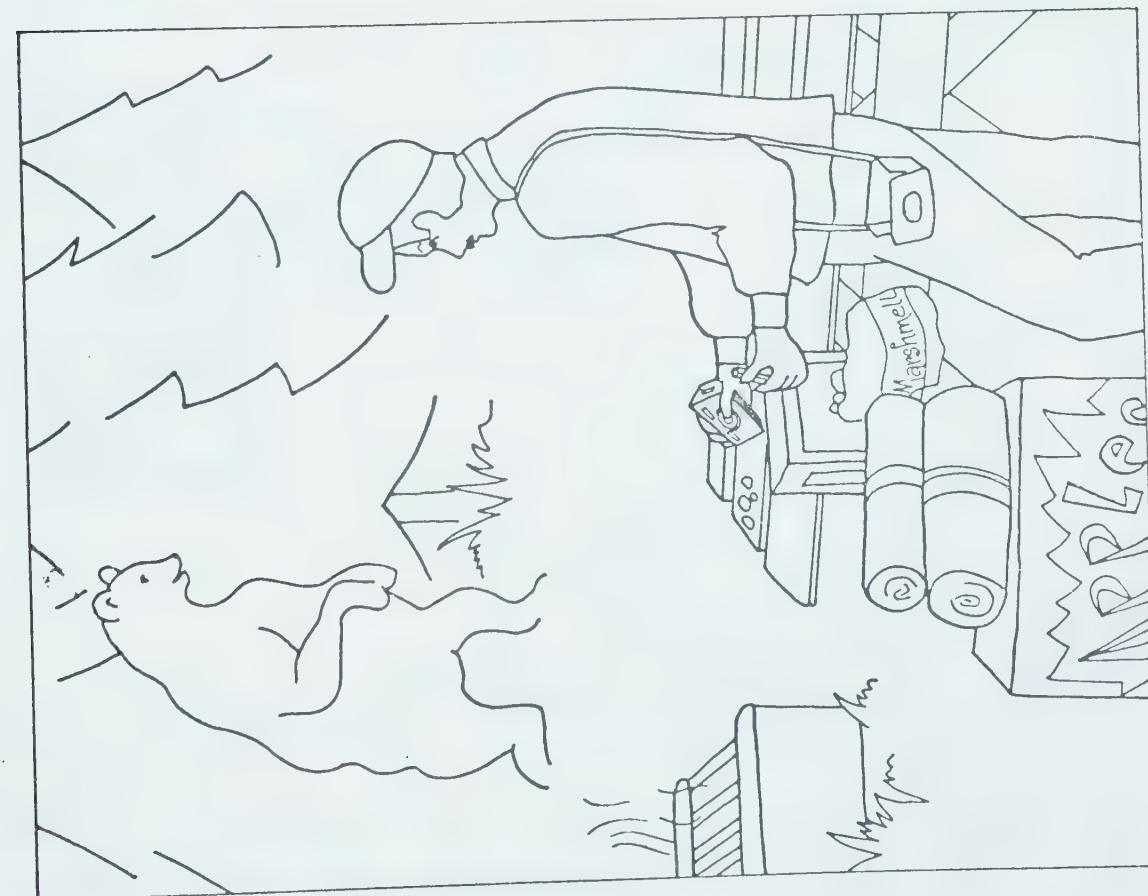


APPENDIX VI

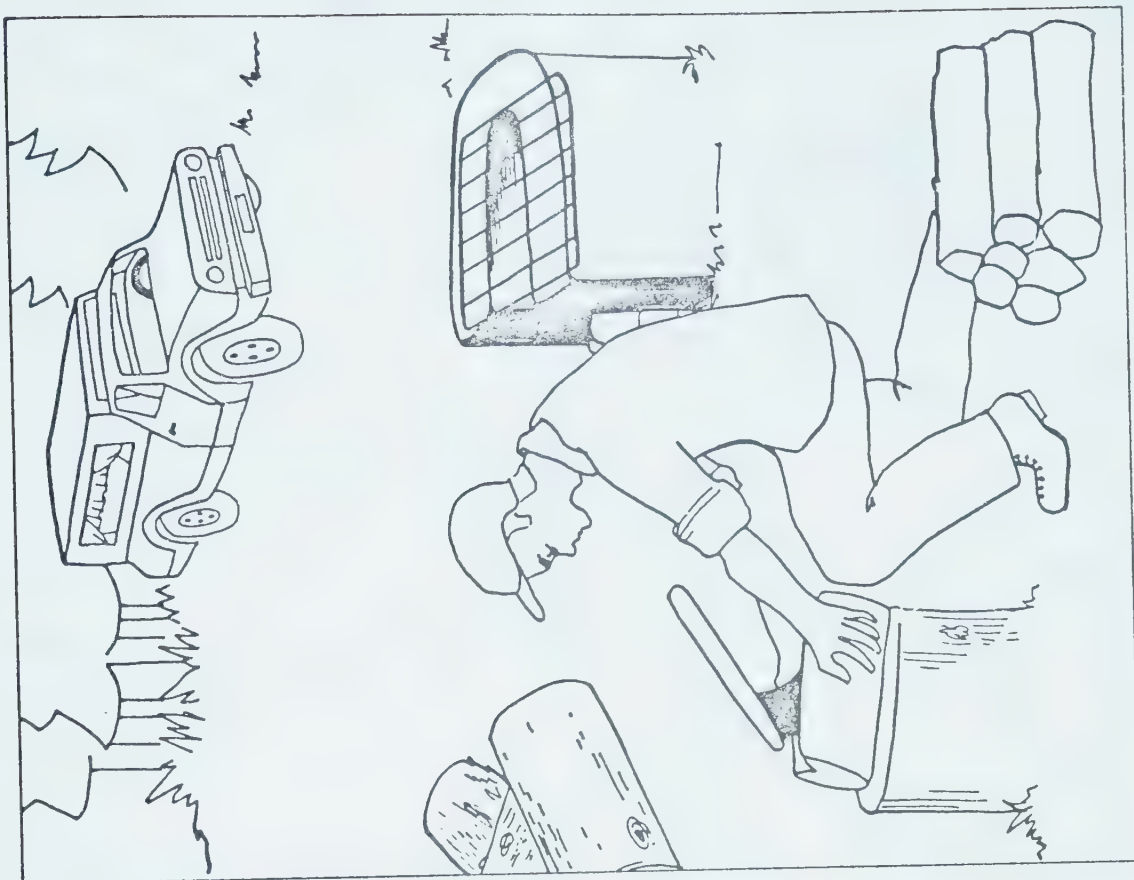
PICTURE SERIES USED IN QUESTION NO. 9 CAMPER  
INTERVIEW AND QUESTION NO. 10 IN MANAGEMENT  
QUESTIONNAIRE





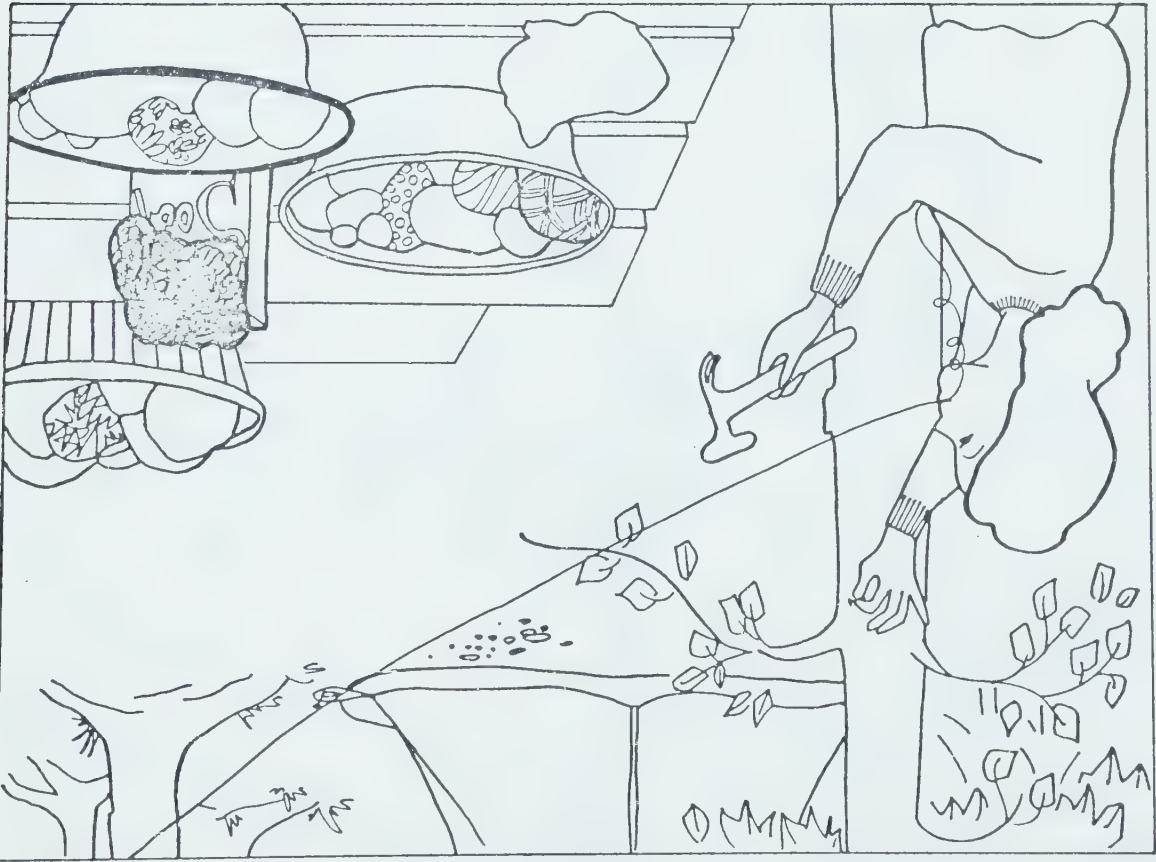


Picture 1



Picture 2



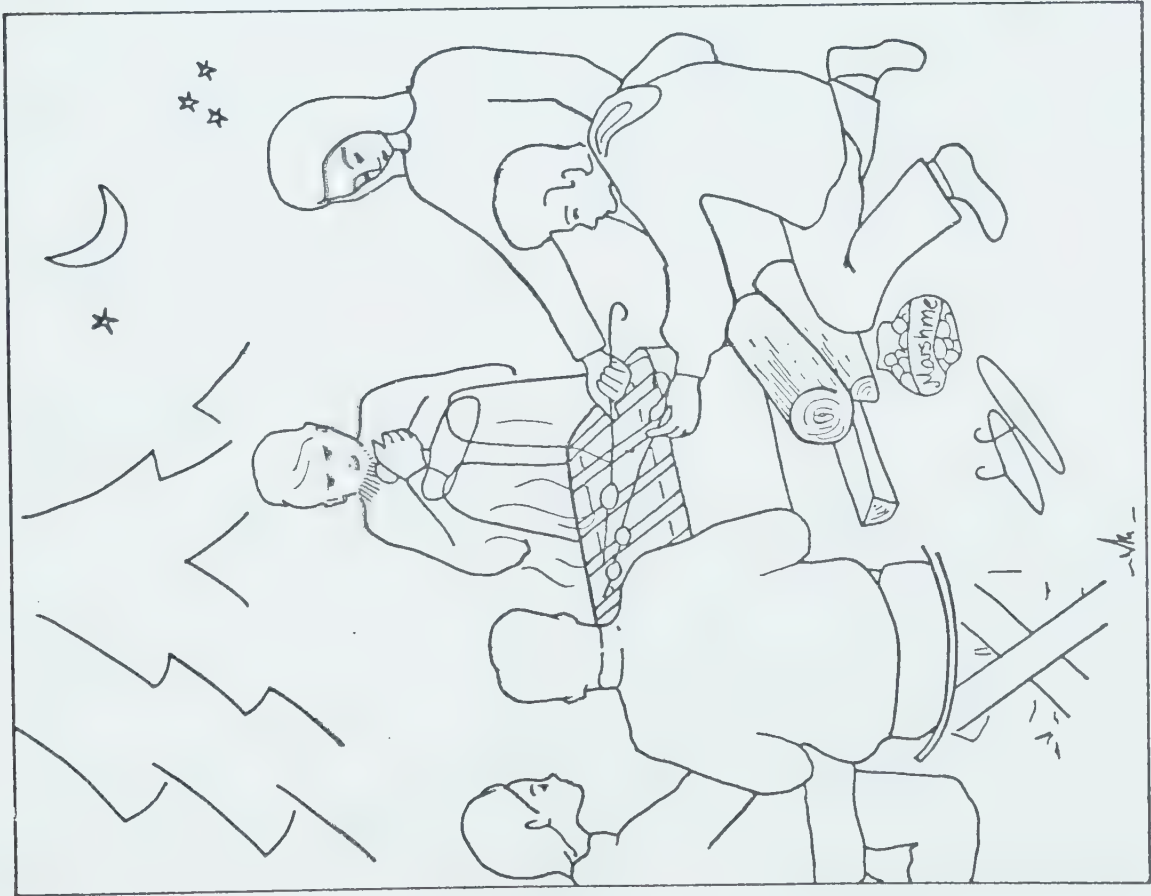


Picture 3



Picture 4





Picture 5



Picture 6



## APPENDIX VII

### MANAGEMENT QUESTIONNAIRE CALL BACK LETTERS





September 20, 1972

Mrs. Lorna Stickel  
Geography Dept.  
Univ. of Alberta  
Edmonton, Alberta

Dear Sir:

If you remember I sent you a questionnaire form at the beginning of August concerning your views on campers and their behavior. I would like to remind you that you still have this form and some weeks have passed since you received it. Your response to this questionnaire is very important to my study and could have some importance in the future planning and administration of National Park campgrounds. I do hope that you will complete your questionnaire form as soon as possible and return it to me care of the Geography Dept. at the University of Alberta. Thank you very much,

Sincerely Yours,

Lorna Stickel  
Graduate Studies



DEPARTMENT OF GEOGRAPHY  
TELEPHONE (403) 432-3274



THE UNIVERSITY OF ALBERTA  
EDMONTON, CANADA T6G 2H4

November 20, 1972

Mrs. Lorna Stickel  
Geog. Dept.  
University of Alberta

Dear Sir:

It has been a few months since you received your questionnaire on camper behavior. Perhaps you have been busy or forgot about it. The results of this study so far have been interesting, but the time is getting closer to when the results will have to be written up. Your viewpoint is needed for this study--would you please consider taking a little time and completing your questionnaire? I hope this final reminder will help to give me your thoughts on the smaller highway campground camper. Thank you for any time that you may spend on this urgent matter.

Sincerely yours,

Lorna Stickel  
Graduate Student



APPENDIX VIII

SUPPLEMENTAL DATA FROM THE CAMPER INTERVIEW



TABLE 33

## RANKING OF REASON GIVEN FOR LIKING TO CAMP

| <u>Reasons</u>                                                        | <u>Times<br/>Mentioned</u> |
|-----------------------------------------------------------------------|----------------------------|
| 1) Contact with nature, like the outdoors,<br>fresh air               | 63                         |
| 2) Get away from the city                                             | 42                         |
| 3) Economical                                                         | 27                         |
| 4) Get away from the routine daily life                               | 25                         |
| 5) Goes well with travelling, it is a good way<br>to see the country  | 19                         |
| 6) Enjoy the activity itself                                          | 16                         |
| 7) Provides a chance to meet other people                             | 12                         |
| 8) To see the scenery in the area                                     | 11                         |
| 9) It is a relaxing, peaceful, and quiet activity                     | 10                         |
| 10) It is a freer mode of travel allows greater<br>choice             | 8                          |
| 11) It is a family activity                                           | 7                          |
| 12) Enjoy the traditions style of camping and its<br>values           | 6                          |
| 13) To get away from people - crowds                                  | 6                          |
| 14) Campgrounds are good base areas for other<br>activities or places | 5                          |
| 15) Education reasons                                                 | 2                          |
| 16) It is a habit                                                     | 2                          |
| 17) More convenient activity when a person has<br>children            | 1                          |
| 18) It is a personal life-style year round                            | <u>1</u>                   |
|                                                                       | 263                        |

TABLE 34

## WHY DID YOU SELECT THIS CAMPGROUND TO STAY AT?

| <u>Reasons</u>                                                | <u>Times<br/>Mentioned</u> |
|---------------------------------------------------------------|----------------------------|
| 1) Saw the campground on a map or traveller's<br>guide        | 63                         |
| 2) Was in the right place when decided to stop<br>for the day | 57                         |
| 3) Saw from the road pulled in and decided to stay            | 32                         |
| 4) Previous knowledge of the campground                       | 23                         |
| 5) The previous campground was full                           | 23                         |
| 6) Proximity to places or recreational locations              | 22                         |





TABLE 34 CONTINUED

| <u>Reasons</u>                                                          | <u>Time<br/>Mentioned</u> |
|-------------------------------------------------------------------------|---------------------------|
| 7) Pulled in - looked nice and decided to stay                          | 19                        |
| 8) Like the smaller campgrounds, quieter and more secluded              | 15                        |
| 9) Was the only one open on the travel route                            | 13                        |
| 10) Informed of campground location by Canadian Parks Service personnel | 6                         |
| 11) Recommended by friends, relatives, or other campers                 | 5                         |
| 12) First campground in from the East Gate                              | 5                         |
| 13) Thought campgrounds closer to Jasper townsite would be full         | 5                         |
| 14) Serviced campgrounds were full                                      | 4                         |
| 15) Was large enough to park recreation vehicle                         | 1                         |
| 16) Bad weather ahead so stopped (snow)                                 | 1                         |
|                                                                         | <hr/>                     |
|                                                                         | 294                       |

TABLE 40

TYPES OF PROBLEMS MENTIONED BY CAMPERS WHO FELT THAT  
THERE WERE PROBLEMS WITH CAMPER BEHAVIOR  
IN THE UNDEVELOPED CAMPGROUNDS

| <u>Items</u>                                | <u>Time<br/>Mentioned</u> |
|---------------------------------------------|---------------------------|
| Noise problems                              | 10                        |
| Pets being loose or being nuisances         | 6                         |
| Littering                                   | 5                         |
| Damage to natural environment               | 5                         |
| Drinking                                    | 2                         |
| Privacy violations                          | 1                         |
| Food left outside                           | 1                         |
| Drainage of waste material on the ground    | 1                         |
| Lack of courtesy on the part of the campers | 1                         |
| Campers taking chopped wood                 | 1                         |
|                                             | <hr/>                     |
|                                             | 33                        |



TABLE 43

TYPES OF CHANGES SUGGESTED BY CAMPERS WHO FELT THAT CERTAIN  
CAMPGROUND CHANGES WERE NEEDED (QUESTION SEVENTEEN)

| <u>Items</u>                                                                                            | <u>Times<br/>Mentioned</u> |
|---------------------------------------------------------------------------------------------------------|----------------------------|
| 1) Permanent staff in the campgrounds                                                                   | 12                         |
| 2) Have sites further apart                                                                             | 6                          |
| 3) More screening vegetation to separate the sites<br>from each other                                   | 5                          |
| 4) Stricter enforcement of rules and regulations                                                        | 4                          |
| 5) Attendants or wardens coming in the campgrounds<br>more often                                        | 3                          |
| 6) Separate areas in campground for tents and<br>trailers                                               | 3                          |
| 7) A better method of marking site occupancy                                                            | 3                          |
| 8) More tent sites and sites for larger tents                                                           | 2                          |
| 9) More post barriers to keep people out of areas                                                       | 2                          |
| 10) Orientation for campers concerning the rules                                                        | 1                          |
| 11) Police patrolling                                                                                   | 1                          |
| 12) Provision of a few primitive sites for overflow                                                     | 1                          |
| 13) A place to dispose of waste materials                                                               | 1                          |
| 14) More campsites to prevent overcrowding                                                              | 1                          |
| 15) Posted rules and regulations                                                                        | 1                          |
| 16) A play area for children                                                                            | 1                          |
| 17) Special parking area for cars so people walking<br>to their sites                                   | 1                          |
| 18) Restrictions on larger trailers and motor<br>homes in smaller campgrounds                           | 1                          |
| 19) The use of campground full signs to prevent<br>people from driving in looking for sites at<br>night | 1                          |
|                                                                                                         | <hr/> 50                   |

TABLE 44

RULES MENTIONED BY CAMPERS AS BEING IMPORTANT WHEN THEY CAMP

| <u>Rules</u>                                  | <u>Times<br/>Mentioned</u> |
|-----------------------------------------------|----------------------------|
| 1) Cleanliness                                | 109                        |
| 2) Consideration for other campers            | 57                         |
| 3) Safety with fires                          | 51                         |
| 4) Being quiet - keeping the noise level down | 47                         |



| <u>Rules</u>                                              | <u>Time<br/>Mentioned</u> |
|-----------------------------------------------------------|---------------------------|
| 5) Consideration for the natural environment              | 20                        |
| 6) Respect for the privacy of others                      | 8                         |
| 7) Obeying campground rules                               | 7                         |
| 8) Keeping pets on leashes                                | 5                         |
| 9) Reference for the "spirit" of camping                  | 4                         |
| 10) Don't bother or molest wildlife                       | 4                         |
| 11) Don't leave food on picnic tables                     | 4                         |
| 12) Being friendly and helpful to other campers           | 4                         |
| 13) Don't trample or damage the undergrowth<br>vegetation | 3                         |
| 14) Keeping children disciplined                          | 3                         |
| 15) Not to damage park facilities                         | 2                         |
| 16) Respect for private property                          | 2                         |
| 17) Keeping the restrooms clean                           | 2                         |
| 18) Camping only in the designed sites                    | 1                         |
| 19) Not damaging the trees                                | 1                         |
| 20) Honesty while camping                                 | 1                         |
| 21) Taking advantage of educational programs              | 1                         |
|                                                           | <hr/>                     |
|                                                           | 330                       |

OTHER CAMPER ACTIVITIES MENTIONED BY THE CAMPERS WHICH  
BOTHERED THEM IN A CAMPGROUND

| <u>Items</u>                                                    | <u>Time<br/>Mentioned</u> |
|-----------------------------------------------------------------|---------------------------|
| 1) Trailbikes or mini-bikes noise in the<br>campground          | 15                        |
| 2) Overcrowding                                                 | 5                         |
| 3) Automobile speeding or noise                                 | 4                         |
| 4) Group takeovers of shelters or areas of the<br>campground    | 3                         |
| 5) Use of larger recreation units in the smaller<br>campgrounds | 3                         |
| 6) Coming in late at night and making a lot of<br>noise         | 2                         |
| 7) Sanitation problems with pets in sites                       | 2                         |
| 8) Generator noise on trailers                                  | 2                         |
| 9) People washing dishes at the water taps                      | 2                         |
| 10) Harming or bothering wildlife                               | 2                         |
| 11) Tents blocking a public facility with a<br>tent             | 1                         |



| <u>Items</u>                                               | <u>Times<br/>Mentioned</u> |
|------------------------------------------------------------|----------------------------|
| 12) Campers using lighter fluid carelessly                 | 1                          |
| 13) Campers not using a check-in-out board<br>if available | 1                          |
| 14) Vandalism such as painting names on things             | 1                          |
| 15) Lack of camper courtesy or respect for<br>privacy      | 1                          |
| 16) The use of drugs                                       | <u>1</u>                   |
|                                                            | 46                         |





APPENDIX IX

SUPPLEMENTAL DATA FROM THE MANAGEMENT  
QUESTIONNAIRE



TABLE 58

MANAGEMENT VIEWPOINTS ON WHY CAMPERS SELECT THE SMALLER  
UNDEVELOPED CAMPGROUNDS

| <u>Reasons</u>                                                        | <u>Times<br/>Mentioned</u> |
|-----------------------------------------------------------------------|----------------------------|
| 1) Campers are forced into these campgrounds by lack of other choices | 8                          |
| 2) They are smaller and quieter                                       | 8                          |
| 3) More secluded and out of the way                                   | 6                          |
| 4) Get away from the city and regimented crowds                       | 6                          |
| 5) On the road at the right time or place                             | 4                          |
| 6) A desire to rough it - campers like primitive conditions           | 2                          |
| 7) Economic reasons                                                   | 2                          |
| 8) Get closer to nature                                               | 2                          |
| 9) No rule enforcement there                                          | 1                          |
| 10) Lack of knowledge about other campground types                    | 1                          |
| 11) May not have to pay the camping fee                               | 1                          |
| 12) A way of meeting people                                           | 1                          |
|                                                                       | <hr/>                      |
|                                                                       | 42                         |

TABLE 61A

TYPES OF PROBLEMS MENTIONED BY THOSE MANAGERS WHO FELT THAT  
THERE WERE PROBLEMS WITH CAMPER BEHAVIOR  
IN UNDEVELOPED CAMPGROUNDS

| <u>Reasons</u>                                        | <u>Times<br/>Mentioned</u> |
|-------------------------------------------------------|----------------------------|
| 1) Noise created by campers                           | 6                          |
| 2) Violating park regulations                         | 3                          |
| 3) Defacement and damage of natural areas             | 3                          |
| 4) Camping in nondesignated areas                     | 3                          |
| 5) Leaving food out where it attracts bears           | 2                          |
| 6) Leaving facilities in poor conditions              | 2                          |
| 7) Overcrowding                                       | 2                          |
| 8) Open fires                                         | 2                          |
| 9) Lack of respect for the purpose of a national park | 2                          |
| 10) Inconsiderateness of other campers                | 2                          |
| 11) More than one party to a site                     | 2                          |
| 12) Going off main roads and trails                   | 1                          |
| 13) Littering                                         | 1                          |
| 14) Theft                                             | 1                          |
| 15) Pets not under control                            | 1                          |
| 16) Drinking                                          | 1                          |
| 17) Motorbicycle noise and driving around             | 1                          |
|                                                       | <hr/>                      |



TABLE 61b

TYPES OF PROBLEMS MANAGERS FEEL CAMPERS WOULD SUGGEST  
IF THEY WERE AWARE OF DEPRECIATIVE BEHAVIOR  
PROBLEMS IN CAMPGROUNDS

| <u>Reasons</u>                          | <u>Times<br/>Mentioned</u> |
|-----------------------------------------|----------------------------|
| 1) Overcrowding                         | 3                          |
| 2) Leaving food where it attracts bears | 2                          |
| 3) Dogs not under control               | 2                          |
| 4) Leaving facilities in poor condition | 1                          |
| 5) Drinking                             | 1                          |
| 6) Inconsiderateness to other campers   | 1                          |
| 7) Speeding vehicles                    | 1                          |
| 8) Camping in non-designated areas      | 1                          |
| 9) Transient youths in campgrounds      | 1                          |
|                                         | <hr/> 24                   |

TABLE 62a

TYPES OF MANAGEMENT CHANGES WHICH MANAGERS FELT THEY  
COULD SUGGEST

| <u>Changes</u>                                                        | <u>Times<br/>Mentioned</u> |
|-----------------------------------------------------------------------|----------------------------|
| 1) Better garbage facilities and removal                              | 4                          |
| 2) Close the smaller campgrounds                                      | 2                          |
| 3) Keeping the facilities (fireplaces, toilets, garbage cans) cleaner | 2                          |
| 4) Permanent staff in all campgrounds                                 | 2                          |
| 5) More aggressive supervision and rule enforcement                   | 2                          |
| 6) Better signposting                                                 | 1                          |
| 7) Better toilets and maintenance of them                             | 1                          |
| 8) More screening between the sites                                   | 1                          |
| 9) Better system of fees collection                                   | 1                          |
| 10) Better education regarding wild animals                           | 1                          |
| 11) No fireplaces allowed                                             | 1                          |
| 12) Signs in the English language                                     | 1                          |
| 13) Campground attendants with the power to fine illegal campers      | 1                          |
| 14) More cooperation from Warden service in the campgrounds           | 1                          |
|                                                                       | <hr/> 21                   |



TABLE 62b

CAMPGROUND MANAGEMENT CHANGES WHICH MANAGERS FEEL CAMPERS  
MIGHT SUGGEST

| <u>Changes</u>                                           | <u>Mentioned</u> |
|----------------------------------------------------------|------------------|
| 1) Better toilets and maintenance of them                | 3                |
| 2) Better facilities all round (toilets, water, garbage) | 3                |
| 3) Staff on location at all times                        | 3                |
| 4) Better garbage facilities and removal                 | 2                |
| 5) Getting rid of bears in the area of campgrounds       | 2                |
| 6) Keeping the facilities cleaner                        | 2                |
| 7) Better screening between the sites                    | 1                |
| 8) Larger campgrounds                                    | 1                |
| 9) Better system of fees collection                      | 1                |
| 10) Chopped firewood supplies                            | 1                |
| 11) Signs in the English language                        | 1                |
| 12) Naturalist programs in campgrounds                   | 1                |
|                                                          | <hr/>            |
|                                                          | 21               |

TABLE 71

ADDITIONAL ACTIVITIES WHICH MANAGERS FELT WOULD  
BOTHER THEM

|                                                                                          | <u>Mentioned</u> |
|------------------------------------------------------------------------------------------|------------------|
| 1) Many campers do not appreciate the type of environment and policies of national parks | 2                |
| 2) Feeding of animals                                                                    | 2                |
| 3) Two or more parties camped in one site                                                | 1                |
| 4) Using branches from around the campsite for firewood                                  | 1                |
| 5) Trailbikes in campgrounds                                                             | 1                |
| 6) Picnicing in campgrounds                                                              | 1                |
| 7) Fast automobile driving in campgrounds                                                | 1                |
| 8) People washing dishes and hands under the well or taps                                | 1                |
| 9) Coming in late to find a site and creating noise and shining bright lights            | 1                |
|                                                                                          | <hr/>            |
|                                                                                          | 11               |





TABLE 72A

## RULES MANAGERS FELT WERE IMPORTANT WHILE CAMPING

| <u>Rules</u>                                | <u>Times<br/>Mentioned</u> |
|---------------------------------------------|----------------------------|
| 1) Cleaning up after onself                 | 12                         |
| 2) Not to feed or molest wildlife           | 10                         |
| 3) Consideration for other campers          | 8                          |
| 4) Consideration for the environment        | 8                          |
| 5) Only to camp in designated sites         | 8                          |
| 6) Not to drive off the regular roads       | 3                          |
| 7) Being careful with fires                 | 3                          |
| 8) Being quiet while camping                | 2                          |
| 9) Not to damage the trees                  | 1                          |
| 10) Pay the camping fee                     | 1                          |
| 11) Consideration of own personal wellbeing | 1                          |
| 12) Safety concerning people and animals    | 1                          |
|                                             | <hr/>                      |
|                                             | 58                         |

TABLE 72b

RULES MANAGERS FEEL CAMPERS WOULD MENTION AS  
BEING IMPORTANT

| <u>Rules</u>                             | <u>Times<br/>Mentioned</u> |
|------------------------------------------|----------------------------|
| 1) Cleaning up after oneself             | 13                         |
| 2) Consideration of other campers        | 6                          |
| 3) Being careful with fire               | 6                          |
| 4) Being quiet at late hours             | 4                          |
| 5) Consideration for the environment     | 4                          |
| 6) Not to feed or molest wildlife        | 1                          |
| 7) Leaving firewood for the next camper  | 1                          |
| 8) Paying the camping fee                | 1                          |
| 9) Consideration for ones own wellbeing  | 1                          |
| 10) Only camping in designated sites     | 1                          |
| 11) Safety concerning people and animals | 1                          |
| 12) Keeping the toilets clean            | 1                          |
| 13) Not to drive fast in the campground  | 1                          |
|                                          | <hr/>                      |
|                                          | 41                         |



TABLE 73

## SOLUTIONS TO OVERCROWDING MENTIONED BY MANAGERS

| <u>Solution</u>                                                                                                   | <u>Times<br/>Mentioned</u> |
|-------------------------------------------------------------------------------------------------------------------|----------------------------|
| 1) Restricting the number of campers allowed in the park at any one time                                          | 7                          |
| 2) Campgrounds outside the national park gates                                                                    | 6                          |
| 3) Increased facilities within the parks                                                                          | 5                          |
| 4) Only day use allowed in the national parks                                                                     | 2                          |
| 5) Reservation system for campers                                                                                 | 2                          |
| 6) Two permits given at the gates, one for going through (say costing \$1) and one for campers (say costing \$10) | 2                          |
| 7) No overflow camping allowed in the park                                                                        | 1                          |
| 8) Larger campgrounds in fewer areas and no small ones                                                            | 1                          |
| 9) Annexation of areas outside the present park boundaries and developing large campgrounds in this area          | 1                          |
| 10) Less advertising of facilities                                                                                | 1                          |
| 11) Discouragement of the recreational camper from using the national parks                                       | 1                          |
|                                                                                                                   | <hr/> 29                   |

TABLE 74

## SOLUTIONS OFFERED BY MANAGERS TO HELP CAMPERS BECOME MORE AWARE OF THE NATIONAL PARK RULES AND REGULATIONS

| <u>Solutions</u>                                                                        | <u>Times<br/>Mentioned</u> |
|-----------------------------------------------------------------------------------------|----------------------------|
| 1) More education outside the parks via mass media before campers ever get to the parks | 7                          |
| 2) Stricter law and rule enforcement                                                    | 5                          |
| 3) More pamphlets given at the park gates and in campgrounds                            | 4                          |
| 4) Better education of campers                                                          | 2                          |
| 5) Properly placed signs in the campgrounds                                             | 2                          |
| 6) Signs in the kitchen shelters                                                        | 1                          |
| 7) Tests for campers to obtain permits to camp                                          | 1                          |
| 8) More interpretive programs in the campgrounds                                        | 1                          |
|                                                                                         | <hr/> 23                   |











SPECIAL COLLECTIONS  
UNIVERSITY OF ALBERTA LIBRARY

REQUEST FOR DUPLICATION

I wish a photocopy of the thesis by

Sticker, L (author)

entitled \_\_\_\_\_

The copy is for the sole purpose of private scholarly or scientific study and research. I will not reproduce, sell or distribute the copy I request and I will not copy any substantial part of it in my own work without permission of the copyright owner. I understand that the Library performs the service of copying at my request, and I assume all copyright responsibility for the item requested.





**B30051**